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ABSTRACT

This report presents the findings from a study designed: (1) to determine the current availability and utility of student outcome statistics in the nation; and (2) to examine the feasibility and desirability of nationwide institutional reporting of student outcome data. Following an introductory section on the purposes of the report and the approaches taken, section II addresses the desirability of student outcome data, focusing on the utility of the information and the necessary properties of outcome statistics. Section III explores sources of available data on postsecondary student outcomes and describes current capabilities for reporting institutional-level student outcomes, examining both institutional and state capabilities as well as other sources. Section IV discusses problems with institutional-level student outcome reporting, examining the quality of data that are currently available and the current and prospective uses of these data. Section V identifies those aspects of student outcomes statistics that require definitional specificity and describes data collection procedures and methodologies that could minimize the various problems of student-outcome reporting and produce useful and meaningful institution-level data. Finally, section VI summarizes the report and formulates conclusions concerning the desirability and feasibility of different approaches for obtaining student outcome information. Suggestions for specific actions that must be initiated if meaningful institution-level student outcome data are to be a reality for all postsecondary institutions in the nation are provided. Appendices include technical notes and summaries of definition working group meetings. (14 references) (GLR)

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Feasibility Report

February 1992

Postsecondary Student Outcomes: A Feasibility Study

U.S. DEPARTMENT OF EDUCATION
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NATIONAL CENTER FOR EDUCATION STATISTICS

Feasibility Report **February 1992**

Postsecondary Student Outcomes: A Feasibility Study

Roslyn Korb
Postsecondary Education Statistics Division

U.S. Department of Education
Office of Educational Research and Improvement **NCES 92-013**

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Office of Educational Research and Improvement
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Acting Commissioner

National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

February 1992

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EXECUTIVE SUMMARY

The purpose of this study is twofold: to determine the current availability and utility of student outcome statistics in the nation and to examine the feasibility and desirability for nationwide institutional reporting of student outcome data. The findings will assist in responding to the mandate of section 103(c) of Title I of the Student-Right-to-Know and Campus Security (SRK) Act (PL 101-542) that requires the Secretary (of the U. S. Department of Education), in conjunction with representatives of institutions of higher education, to "analyze the feasibility and desirability of making available to students and potential students -

(A) the completion or graduation rate of individuals at an institution broken down by program or field of study;

(B) the completion or graduation rate of an institution reported by individual schools or academic divisions within the institution;

(C) the rate at which individuals who complete or graduate from the program of an institution pass applicable licensure or certification examinations required for employment in a particular vocation, trade, or professional field;

(D) the rate at which individuals who complete or graduate from an occupationally specific program and who enter the labor market following completion of or graduation from such a program obtain employment in the occupation for which they are trained; and

(E) other institutional outcomes that may be appropriate."

This study considers each of the specified student outcomes along with two other institutional outcomes - cognitive outcomes and earnings of graduates/completers. Additionally, rates of transfer from one institution to another are considered separately from graduation/completion rates.

Methods

Data and information from several sources are synthesized in this report. They include: (1) A survey of a nationally representative sample of postsecondary institutions conducted by the National Center for Education Statistics (NCES). Its purpose was to determine institutional capability for reporting student outcome statistics; (2) Results from a survey of higher education institutions concerning their student assessment activities. This survey was conducted and reported by the American Council on Education (ACE); (3) Data from three studies on state-level capability for reporting student outcome statistics and on state uses of student outcome data; and (4) Results from previous attempts to obtain student outcome data from postsecondary institutions. In addition, numerous discussions were held with representatives from all sectors of the postsecondary education community to ascertain current thinking in the area of student outcomes.

Desirability

When considered in conjunction with the literature on postsecondary student outcomes, the data assembled for this study clearly indicate that having information on student outcomes from individual postsecondary institutions is desirable. A surprisingly large number of institutions and state postsecondary agencies have and can report student outcome statistics. For example, 79 percent of postsecondary institutions indicated they determined and could report a graduation rate and 39 state higher education agencies indicated they could report or will soon be able to report graduation rates for in-state public institutions.

The prevalence of these data suggests widespread interest in them and good faith efforts to collect and maintain them for institutional use and/or state reporting. Additionally, there is ample evidence that student outcomes are of interest and could be useful to consumers and financiers of postsecondary education for both consumer protection purposes and institutional accountability.

For student outcome data to be useful for institutional self-evaluation or accountability purposes, however, they must validly measure the phenomena they purport to describe and should produce unbiased and consistent results. For these data to be adequate and appropriate for consumer protection use, they should also be comparable among reporting entities so that consumers have a common basis on which to make an informed choice. While it may be argued that some information is better than no information, from a consumer protection perspective, non-comparable or incomplete information may be worse than no information if it leads consumers to false choices.

Current Availability and Utility of Student Outcome Data

Judged on the basis of these criteria and the information and data gathered for this report, it is evident that, regardless of their prevalence, no currently available student outcome data, including graduation/completion rates, are completely adequate for consumer protection purposes at a national level. Currently available student outcome statistics either are not comparable among institutions, institutional sectors, or states; or, they are incomplete, or unreliable.

Lack of comparability was the major problem with currently available graduation/completion rates. Although the NCES survey of postsecondary institutions found that 79 percent of postsecondary institutions in the nation determine and can report a graduation/completion rate, only 41 percent of all institutions use an optimum methodology (tracking a group or cohort of entering students from initial enrollment at the institution to completion). Among public 2-year institutions, only about 28 percent of institutions use this methodology.

Even among schools that use a cohort methodology to determine a graduation/completion rate, the data suggest that the procedures for implementing this methodology vary substantially among postsecondary institutions. Specifically, although there seems to be a substantial degree of similarity in the definition of an initial cohort to track, the similarities evaporate in the process of tracking a cohort through to completion. Even the definition of a graduate/completer varies somewhat among institutions.

Similarly, tests used by postsecondary institutions to assess students' college-level basic skills are not comparable. The ACE survey found that although 72 percent of higher education institutions (a subset of all postsecondary institutions) indicated they assess the basic skills of their students, only 18 percent believed their assessments results could be compared to those of other institutions.

Problems with reliability, coverage and representativeness adversely affect the usefulness of currently available employment statistics and licensure/certification examination pass rates. Eighty percent of all institutions reported on NCES' institutional survey that they could determine the employment outcomes of their graduates/completers. Fifty-eight percent reported being able to determine if their graduates/completers obtained necessary and appropriate licenses or certifications. Most of these institutions also reported that they assess these post-completion outcomes by surveying their graduates some time after they have left the institution. Surveys of graduates tend to have low response rates. Low response rates generally result in unreliable and inconsistent statistics. They may result in biased statistics as well if respondents and non-respondents have different demographic characteristics or if they are in different post-completion circumstances.

Information on individuals who transfer from an institution is generally not available to the individual institution. When asked by the NCES survey if they could determine that a student who left their institution actually transferred to another postsecondary institution, only about 12 percent of all postsecondary institutions indicated that they could currently obtain this information.

State postsecondary education agencies also collect and report institution-level student outcome data. A survey of state higher education agencies indicated that 28 of these agencies could or will soon be able to report graduation/completion rates for all in-state, public 4-year institutions and 22 could or will soon be able to report them for the entire state/system. A separate poll of state postsecondary vocational oversight agencies indicated that 33 collected placement data on public postsecondary vocational program completers. Twenty-seven of these agencies, representing 46 percent of public 2- and less-than-2-year schools, collected data on training-related placement and 12 reported collecting licensure information for about one-third of public postsecondary schools with vocational programs.

However, differences in definitions among institutional sectors even within a single state were cited as being extremely problematic in interviews with representatives of state vocational oversight agencies. This is apparently due to the segmentation of oversight responsibilities within states. For example, in only eight states are public 2-year, public less-than-2-year and private, for-profit schools the responsibility of the same agency. Thus, while state higher education and postsecondary vocational education oversight agencies have a substantial amount of data that are related to student outcomes, the comparability of these data among and even within states is questionable.

Feasibility of Collecting Valid and Comparable Outcome Data

For most student outcomes that were examined in this report it is possible to identify basic definitions and methodologies for developing comparable, consistent and valid institution-level student outcome statistics based on currently used best practice. For two of them, however, identifying a reasonable approach for achieving comparable and complete data was not possible.

Graduation/Completion Rates

The best practice for determining institution graduation/completion rates can be implemented by individual institutions. It requires each institution to: adopt the same cohort methodology for determining the rate; employ a standard definition of which students to include in the cohort and in calculating the rate; and report the rate by the same student and institutional characteristics.

For example, separate cohorts could be established for degree-seeking full-time, part-time, and transfer students upon initial entrance to the institution. Institutions could report graduation rates of these cohorts by meaningful, relatively static student characteristics such as gender, race/ethnicity, age or intended major field of study at the time of initial enrollment. On the other hand, institutions would find it difficult, if not impossible, to report graduation/completion rates by actual major field of study, academic division or any variable that changes frequently over a short period of time.

That postsecondary institutions throughout the nation can readily adopt data collection and reporting standards, once they are established and disseminated, has been demonstrated through the collection and reporting of other intra-institution statistics.

Implementing the best practice for transfer rates and employment outcomes, on the other hand, can be achieved most effectively and efficiently at the state level through state student unit-record systems that encompass all institutional sectors (both public and private).

Transfer Rates

Determining transfer rates of students from one institution to another, as distinct from graduation/completion rates, is possible, but is highly dependent on at least state-level involvement. Statewide student record systems that can track students as they transfer from any institution included in the statewide system to any other institution in the system have been operational in several states for a number of years although the institutional coverage varies among states. Alternatively, electronic transcripts through which machine-readable performance and enrollment information about individual students can be transmitted from one institution to another is a developing method for tracking transfers. However, the efficacy of this approach has not been demonstrated.

Employment Outcomes

For determining valid, consistent and comparable employment outcomes (employment rates and earnings) of graduates/completers, an efficient and cost-effective methodology is through electronically linking state files containing graduate/completer school records with available Unemployment Insurance (UI) Wage-Record Data. This methodology is currently being used by one state to determine employment outcomes of postsecondary completers in public sector institutions and has been tested in 13 other states to determine the employment outcomes of Job Training Partnership Act program completers. It is estimated that this method alone can account for between 70 and 90 percent of all postsecondary education completers in a state. For more comprehensive coverage, the UI data would have to be supplemented with information from employers not included in the UI system, with UI data from neighboring states, and, to determine the relatedness of completers' employment to their education, with surveys of employers identified through the UI records.

Comparable and complete data for licensure/certification pass-rates and postsecondary assessments would be extremely difficult to achieve under any circumstances. Moreover, there is currently no best practice on which to model such complex data collection.

Licensure/Certification Examination Pass Rates

Institution-level pass rates on licensure or certification examinations would be consistent and somewhat comparable indicators of student achievement, especially when these tests are administered at a national rather than a state level. However, the uneven coverage of licensure/certification requirements across fields of study and the difficulties in obtaining institution-level pass rates from the multitude of licensing and certification boards are currently prohibitive obstacles, particularly for schools with multiple programs. Additionally, many licensure/certification examinations are administered at the state level with each state having its own examination and criteria for passing. Thus, even if the data were collectable, their comparability would be problematic.

Assessment Outcomes

For assessment of student learning or cognitive skills, it might be possible to develop some type of postsecondary assessment (e.g., a test of postsecondary-level basic skills or tests of subject-matter achievement) that possibly could be consistently applied to all postsecondary institutions regardless of the entering level skills of their students. However, the relevancy of basic skill testing to all postsecondary institutions in the nation would be doubtful; and, clearly different subject-matter achievement tests would have to be developed and applied to different sectors of postsecondary institutions. Moreover, either of these assessment approaches would be a long-term, costly effort, requiring a substantial degree of research, development, and consensus-building.

Additional Considerations

Two additional suggestions are warranted if graduation/completion rates and other institution-level student outcomes are to be as meaningful as possible to all potential users.

Need for Contextual Information

Student outcomes are related not only to the efforts and effectiveness of the postsecondary institution, but also to the characteristics of the students in the institution. Thus, it is vital that contextual information describing the institution's student population be considered in conjunction with its student outcome data. Indeed, it may be that for truly valid comparisons among postsecondary institutions, institutional outcome statistics should be adjusted to account for differences in characteristics among the students served by the institution.

Need for Facilitating the Collection of Comparable Data

The different requirements for data collection and reporting indicated in sections 103 and 104 of Title I of the SRK Act distinguish postsecondary institutions on the basis of their athletically-related student aid policies.[1] This distinction will tend to perpetuate the non-comparability of student outcome statistics among postsecondary institutions and should be reconsidered. If information, such as graduation rates by gender or race/ethnicity, or average graduation/completion rates are useful, they should be available to all potential students and their families and from all postsecondary institutions.

Conclusions

Clearly, implementing the suggested best practice will require the investment of resources (personnel, funds, and sufficient time). In some cases it will also require an enlarged state role in data collection and reporting. As a result, there is little hope that even graduation rates as identified in the SRK Act can be fully established for reporting in 1993, as specified in the Student-Right-to-Know Act. The most realistic expectation is that institutions can immediately begin tracking entering students and disclose or report persistence rates until the first cohort matures. (For 4-year institutions a cohort of entering students would not mature until 1998 or 150 percent of the normal 4-year program length.)

For the other specified outcome statistics (i.e., employment outcomes, licensure pass rates) as well as transfer rates and cognitive outcomes, the process of establishing them nationwide will be more difficult and will take more time. Each of them requires some developmental effort and involves a considerable degree of cooperation between postsecondary institutions, state postsecondary agencies, and federal agencies. However, if this investment were made and

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[1] Section 103 of the SRK Act, for example, requires all eligible higher education institutions to disclose a single graduation/completion rate. Section 104 of the Act requires eligible higher educations institutions that provide athletically-related student aid to report graduation/completion rates for all students by gender and race and to separately report graduation/completion rates for students with athletically-related student aid by gender, race, and sport. Section 104 also requires institutions to report an average graduation/completion rates for the four most recent graduating classes of all students and students on athletically related student aid.

sufficient cooperation could be established, reporting of nationwide institution-level student outcome data that would be useful for consumer protection and other comparative purposes is possible and would be worthwhile.

FOREWORD

The impetus for this report was the Student-Right-to-Know and Campus Security Act (P.L. 101-542) enacted in November, 1990. Establishing guidelines to implement the Act is the responsibility of the Office of Postsecondary Education in the U.S. Department of Education (ED). Because this legislation has significant implications for postsecondary education data collection and reporting, however, the National Center for Education Statistics (NCES) has participated in the Department's implementation efforts. This role was supported by NCES' traditional role to provide technical leadership and guidance in defining nationally uniform measures for the collection and reporting of postsecondary education data.

One aspect of NCES' role was to facilitate discussions of the provisions of this legislation among the Department and representatives of a wide variety of postsecondary institutions and organizations. In so doing, NCES utilized the mutually beneficial links it has established through its data collection activities with the postsecondary education community and especially state education agencies and postsecondary institutions.

A second aspect of NCES' role was to provide a foundation for the Department of Education to consider the desirability and feasibility of postsecondary institutions' reporting various student outcomes. Such an analysis is mandated in Section 103 of Title I of the Student Right-to-Know Act. NCES collected data and synthesized information and data from several other sources to examine these dual questions. This report represents the results of that work.

We hope that this report will provide the postsecondary education community with sufficient information and thought-provoking conclusions to enable discussions of student outcomes in postsecondary education to move forward on a coherent and productive path. We look forward to that discourse.

Emerson J. Elliott
Acting Commissioner
National Center for Education Statistics

Paul R. Hall
Acting Associate Commissioner
Postsecondary Education Statistics Division

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This report would not be complete without recognizing the contributions of the many talented, interested and dedicated individuals who contributed to its development. While it is not possible to convey the spirit or enthusiasm that characterized their involvement, it is possible to describe their efforts.

Several individuals contributed to the initial draft of this report. Angela Campbell, an intern with NCES from Harvard University's Kennedy School of Government, researched and drafted reviews of the literature and national legislation on student outcomes. She also conducted and summarized the interviews with state licensure boards and accrediting agencies and organized the data from previous studies. Jim Houser of NCES researched and drafted the section on the Federal Trade Commission regulations.

Peter Ewell and Dennis Jones of the National Center for Higher Education Management Systems provided an institutional student outcome data collection and reporting model that was used in this study.

Judi Carpenter, NCES' Project Officer for its Fast Response Survey System, managed the Fast Response Survey of postsecondary institutions. The data were collected by Westat, Inc. under the direction of Libby Farris and Mary Jo Nolin. Sam Barbett processed both the Fast Response Survey data and the data from NCES' National Postsecondary Student Aid Surveys.

As members of the Department of Education's working group on the Student-Right-to-Know legislation, several individuals helped in the planning of the study and reviewed the report. These include: David Goodwin of the Office of Planning, Budget, and Evaluation, who not only served as a reviewer, but also made the reports of Research Evaluation Associates available; Cliff Adelman of the Office of Research; John Burkett of the Office of Educational Research and Improvement; Paula Husselmann and Jerry Whitlock of the Office of Postsecondary Education; and Peter McCabe of the Office for Civil Rights.

Individuals from the postsecondary education community who reviewed the report include: John Lee of JBL Associates, Charles Lenth of the State Higher Education Executive Officers/NCES Communication Network, Peter Ewell of NCHEMS, Lynn Metcalf from the South Carolina Commission on Higher Education, and Roberta Dunn of the National Endowment for the Arts. Both departmental and outside reviewers provided substantive comments and unique insights that were always thought-provoking and oftentimes gratefully incorporated.

It is with deep appreciation that the efforts of several NCES staff on behalf of this study are acknowledged. MacKnight Black made uncountable and invaluable contributions to every stage of the study from its inception to its completion. He was always available to engage in frequent and fruitful discussions of postsecondary student outcomes; he was the report's most constant critic as well as its most avid supporter.

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SECTION I

PURPOSE OF THE STUDY AND APPROACHES TAKEN

A. Objectives

The purpose of this study was twofold: to determine the current availability and utility of student outcome statistics in the nation and to examine the feasibility and desirability for institutional reporting of student outcome data. In so doing, it will assist in responding to the mandate of section 103(c) of Title I of the Student-Right-to-Know and Campus Security (SRK) Act (PL 101-542) that requires the Secretary, in conjunction with representatives of institutions of higher education, to "analyze the feasibility and desirability of making available to students and potential students -

(A) the completion or graduation rate of individuals at an institution broken down by program or field of study;

(B) the completion or graduation rate of an institution reported by individual schools or academic divisions within the institution;

(C) the rate at which individuals who complete or graduate from the program of an institution pass applicable licensure or certification examinations required for employment in a particular vocation, trade, or professional field;

(D) the rate at which individuals who complete or graduate from an occupationally specific program and who enter the labor market following completion of or graduation from such a program obtain employment in the occupation for which they are trained; and

(E) other institutional outcomes that may be appropriate."

B. Definitions and Treatment of Feasibility and Desirability

Desirability addresses the importance of the data and how and by whom they will be used. Feasibility concerns the reasonableness and practicality of gathering and reporting data.

While the SRK Act implies a distinction between feasibility and desirability, these two concepts are inexorably intertwined. Desirability is concerned with data utility in relation to specific uses and users as well as the data's generic importance. An analysis of the feasibility of collecting and reporting data must be carried out in the context of these specific users and uses. Furthermore, collecting and reporting data require resources. If data are not important, expending limited resources to collect and report them is not sensible. On the other hand, it may not be possible to collect and report demonstrably important data appropriately and adequately to satisfy the need for information.

The SRK Act, for example, was intended as consumer protection legislation and makes the assumption that potential students and their families would use the information on student outcomes for comparing institutions and choosing among them. That students would actually use the information for this purpose is debatable. The feasibility question, however, is whether or not data can be provided that would be adequate for this purpose and appropriate for this specific use.

The very existence of Title I of P.L. 101-542 suggests the desirability of institution-level student outcome data. That Congress passed legislation requiring all postsecondary institutions[2] to disclose graduation rates for their students speaks to the public policy importance of this statistic. The additional reporting requirements in section 104 of the SRK Act for institutions that award athletically related student financial aid and the outcomes specified for the feasibility study in section 103(c) are indicative of a strong national interest in additional student outcomes. Furthermore, as this report will demonstrate, there has been a call for postsecondary student outcome information for a substantial period of time and from a broad spectrum of the postsecondary education community.

C. Assumptions

The statement in the SRK Act that "knowledge of graduation rates would help prospective students and prospective student athletes make an informed judgment about the educational benefits available at a given institution of higher education" indicates that student outcome data should be feasible nationwide at the individual institution level, rather than at just a state or national level.

D. Approaches Used in this Report

This report focuses first on specific uses that could be made of institution-level student outcome data and current capabilities and methods of reporting institution-level student outcomes. It then evaluates the adequacy and appropriateness of currently available outcome data in relation to specific uses and describes some of the problems that have historically been encountered in reporting these data. Finally, this report describes how these specific student outcome statistics could be collected and reported to meet specific user needs given current technology.

In the process of addressing the specific outcome measures indicated in the SRK Act (i.e., training-related employment, licensure and certification pass rates, and other student outcomes), several additional concerns are broached in this report. These include: (1) the feasibility, desirability, and problems with current reporting requirements of the SRK Act, particularly graduation/completion rates, the exclusion of degree-seeking part-time students, and the inclusion of transfers in the definition of "completer"; (2) the need for consistency between sections 103 and 104; and (3) the need to provide contextual data in reporting student outcomes.

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[2]The SRK Act specifies eligible institutions of higher education. This has been defined in this report as all postsecondary institutions in the nation that are eligible for student financial aid (Pell grants, Stafford loans, or campus-based aid) under Title IV of the Higher Education Act of 1965, as amended.

E. Organization of the Report

Section II addresses the desirability of student outcome data. It highlights the generic uses of these data and the evolution of these uses as expressed in both the literature and national legislation. It describes specific uses and users of this type of data from an historical as well as a current perspective, and it provides some insights on prospective uses -- particularly how institutions themselves could make use of this information. It also suggests the technical characteristics a statistic must have to make it adequate and appropriate for a specific use.

Section III explores sources of available data on postsecondary student outcomes and describes current capabilities for reporting student outcomes at an institutional level - both institutional capabilities and state capabilities.

Section IV examines the fit of data that are currently available and current and prospective uses of these data. It describes problems that have been encountered in previous attempts to establish nationwide student outcome data. It also describes problems with currently available data.

Section V suggests those definitions and data collection procedures and methodologies that could minimize the various problems of student-outcome reporting and produce useful and meaningful institution-level student outcome data.

Section VI summarizes the report and formulates conclusions concerning desirability and the feasibility of different approaches for obtaining student outcome information. It also suggests activities that must be initiated if meaningful institution-level student outcome data are to be a reality for all postsecondary institutions in the nation.

SECTION II

DESIRABILITY OF STUDENT OUTCOMES

A. Utility of Student Outcome Information

A review of the literature and previous national postsecondary and vocational education legislation suggests that uses of student outcome information have been considered from two different primary perspectives: institutional accountability and consumer protection. These two perspectives are related, but the approach to student outcomes that each would dictate is somewhat different.

Institutional accountability focuses on the mission of the institution and the goals the institution hopes to meet. The interest and call for increased accountability for postsecondary institutions evolved in conjunction with the more pervasive movement of management by objectives.[3] As a consequence, accountability, for the most part, measures institutional performance (and student performance) against the institution's mission and goals and, possibly, the state's goals for that institution and postsecondary education in the state.

Consumer protection, at least in the narrow sense of the student as the consumer, takes a much more student-oriented approach; it is concerned with the outcomes the student expects as a result of participating in postsecondary education. It virtually disregards the mission of the institution except in those instances where the explicit goals of the institution coincide with student expectations.

In 4-year degree granting institutions, for example, the primary mission has traditionally been viewed as providing instruction in academic courses and programs. Student persistence in, and eventual completion of, these programs has been considered as much the responsibility of the student as the responsibility of the institution. From this institutional perspective, institutional performance would be measured in terms of the effectiveness of the instruction in imparting knowledge and cognitive skills. While gains in knowledge and cognitive skills resulting from the interaction of institution and student effort are relevant to students and prospective students, consumer protection advocates might argue that they may not be quite as important as the expectation that completion of a higher education program will result in an economic advantage for the student in terms of occupation and level of earnings. Thus, from an accountability perspective, the most desirable student outcomes may be in the realm of learning and the development of cognitive skills, while from a consumer protection perspective they would be the experiences of the individual in making the transition from school to work. The SRK Act takes the perspective of consumer protection. It is predicated on the belief that students need certain information to make an informed choice among postsecondary institutions. However, whether students would actually use institution-level student outcomes information in choosing a postsecondary institution has been questioned.

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[3] Astin, A. Measuring the Outcomes of Higher Education in New Directions for Institutional Research, Howard R. Bowen, Ed., California: Jossey-Bass, V.1 no.1, Spring 1974, pp. 23-46.

1. Student uses of student outcome information

To gain some insight into what influences students in selecting a postsecondary institution, data from two national surveys of students enrolled in postsecondary institutions were examined.[4] In the 1986-87 and 1989-90 academic years, NCES asked students why they decided to enter the school they were attending. Students could rate several possible factors that could have influenced their enrollment decision.

Table II-1 presents the percent of students that reported a particular reason was very important by the type of institution students were attending. As it shows, 75 percent of the students in 1987 and 67 percent of the students in 1990 responded that the school's course of study was very important in their choice of school. This was true of students enrolled in all postsecondary institutional sectors from 4-year, degree-granting institutions to less-than-2-year private, for-profit technical/vocational schools. Forty-eight percent in 1987 and 46 percent in 1990 responded that the school's "good reputation" was important, although reputation was important to a higher percentage of students enrolled in private sector schools (both non-profit and for-profit) than in public sectors schools. Thus, significant proportions of students believed that getting a good education in their field of interest was important.

Thirty-six percent of students in 1987 and 33 percent of students in 1990 reported that the school's reputation for placing its graduates was very or somewhat important in their choice of school. However, over half the students in private, non-profit schools in both 1987 and 1990 felt this was an important consideration, and over 63 percent of students in private, for-profit schools in 1987 and 56 percent of students in 1990 reported this was an important reason.

More immediate, primarily economic reasons for choosing a postsecondary institution in addition to its program selection, its reputation, and its ability to place graduates were also considered important by significant numbers of postsecondary education students in both 1987 and 1990 (table II-1).

While students are the most obvious consumers of postsecondary education, they are certainly not the only consumers. Any individual or organization that has a financial interest or other stake in the student's persistence, progression, and completion, such as the student's parents, spouse, or employer could also be considered a "consumer." In fact, in this broader sense, the consumer would include the federal government, as well as state and local governments, since they provide financial assistance to students directly through student financial aid and indirectly through funding allocations to postsecondary institutions.

2. State and other uses of student outcome data

Many states, in addition to being "consumers" of postsecondary education, have oversight responsibilities for some or all sectors of postsecondary education institutions in their state, so their

[4] National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS), 1987 AND 1990, Unpublished tabulations.

Table II-1 --Percentage of enrolled students who indicated that a specific reason was very important in their choice of postsecondary institution, by control and level: Fifty States and District of Columbia, 1987 and 1990

Control and level of institution	Total	School reputation	Financial aid	Course of study	Parents influence	Job at school	Lowest tuition	Lowest living cost	Friends attended	Close to home	Work while attending	Live at home	Far from home	Graduate placement
1987														
Total	11,185,357	48.1	27.0	75.3	9.9	15.4	39.4	25.1	5.4	39.7	46.7	42.0	6.2	36.0
Public	8,557,781	42.9	23.1	74.2	9.5	13.0	46.2	28.7	5.8	44.0	49.6	45.0	5.8	30.7
4-year-and-above	4,248,299	46.4	24.6	74.3	10.1	12.3	42.7	28.5	5.8	34.7	37.0	29.5	5.2	33.9
2-year	4,180,263	38.9	21.1	73.6	8.9	13.1	49.5	28.9	5.9	53.5	62.7	60.3	6.3	26.7
Less-than-2-year	129,219	59.1	37.4	90.7	12.1	34.6	54.5	32.7	5.5	44.6	40.7	58.9	7.5	54.7
Private nonprofit	2,025,593	66.4	34.3	76.3	11.1	17.7	14.8	11.1	3.7	23.5	33.9	25.9	7.2	50.2
4-year-and-above	1,875,373	66.8	33.9	76.0	11.0	17.1	13.9	10.5	3.7	23.0	33.4	25.0	6.9	49.9
2-year	133,779	59.0	38.2	78.3	12.0	23.5	26.0	19.8	4.7	30.0	39.7	35.9	11.2	52.4
Less-than-2-year	16,441	72.1	46.7	89.4	10.9	36.6	17.3	13.2	4.2	27.1	44.9	51.6	7.7	65.7
Private for-profit	601,983	60.1	57.4	87.5	11.8	41.4	26.5	21.0	4.9	32.1	48.9	53.7	8.5	63.3
4-year-and-above	24,843	77.7	39.6	92.4	6.8	44.6	9.2	7.2	3.6	11.3	60.1	33.7	5.2	76.6
2-year	198,605	59.9	51.7	89.8	9.2	42.3	22.8	17.2	3.1	26.6	54.1	50.7	7.0	66.7
Less-than-2-year	378,535	59.0	61.5	86.0	13.5	40.7	29.6	23.9	6.0	36.3	45.4	56.6	9.5	60.6
1990														
Total	14,125,758	46.3	22.4	66.7	8.4	13.0	33.6	20.2	5.9	39.9	47.1	46.4	6.7	32.9
Public	11,151,756	41.9	18.2	65.0	7.9	10.7	39.0	22.8	6.0	43.7	49.6	49.2	6.5	27.9
4-year-and-above	4,594,658	47.2	21.8	68.4	9.5	10.8	36.3	25.5	6.7	35.1	36.7	32.8	6.2	33.9
2-year	6,360,795	37.7	15.4	62.2	6.5	10.0	41.1	20.8	5.4	50.2	59.2	60.7	6.7	23.1
Less-than-2-year	196,303	54.9	25.0	76.7	11.7	27.9	35.9	20.0	9.1	34.1	43.6	55.7	6.8	43.8
Private nonprofit	2,110,055	64.7	30.7	70.4	10.2	15.3	10.8	9.0	5.7	24.4	33.9	29.1	6.7	50.0
4-year-and-above	1,905,461	65.4	30.8	70.2	10.2	14.7	9.9	8.3	5.7	23.8	33.4	27.6	6.6	50.4
2-year	164,458	58.9	28.7	71.7	9.8	18.1	18.9	15.5	5.1	30.8	38.5	41.2	7.4	46.0
Less-than-2-year	40,136	54.8	36.0	74.7	7.2	30.9	20.6	12.1	6.2	22.0	38.3	51.1	9.1	47.2
Private for-profit	863,948	57.6	56.2	78.6	10.7	37.6	18.9	14.8	5.6	28.9	46.4	52.8	10.4	56.5
4-year-and-above	66,163	72.7	56.3	82.1	13.5	44.5	8.5	10.0	3.9	16.6	53.7	30.1	10.8	78.5
2-year	292,003	57.1	55.7	79.7	10.5	35.1	16.7	13.1	4.8	25.9	48.6	52.0	10.4	56.2
Less-than-2-year	505,782	55.8	56.5	77.5	10.4	38.2	21.6	16.4	6.3	32.3	44.1	56.2	10.4	53.9

NOTE: In responding to this item, students were asked to rate each of the reasons presented on a scale from not important to very important. Thus multiple responses were possible.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study: 1987 and 1990

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concern over student outcomes has a strong accountability component as well as a consumer protection interest. As a result, the uses that state agencies make of student outcome information provide a somewhat different perspective on the utility of these statistics.

In a recent survey of state postsecondary vocational oversight agencies, responses of individuals in these agencies to questions concerning uses of student performance data fell into three categories:[5] consumer rights, licensure, and management. Fourteen states make community college student performance data available to the public; 17 states use student outcomes in decisions to renew licenses to operate for-profit institutions; 22 states use this type of information in funding decisions; and several states use it for program review to assess needs for improving operations (13 states), expanding or contracting specific occupational programs (21 states), or taking corrective actions (18 states).[6]

Clearly, states are significant users of student outcome data. Their reported uses cut across both consumer protection and institutional accountability. States also reported using institution-level student outcome data in assessing needs for improving institutional operations. This use is particularly relevant to institutions. It permits states to work in partnership with institutions in making sound management decisions about program offerings, enrollment size, and program quality.

Notably, Ewell and Jones[7] argue that one of the most important uses of institution-level student outcome data is that made by institutions themselves. Such data have a multiplicity of uses for institutions' self-assessment and evaluation activities.

In addition, it is of interest to examine the utility of student outcome information in the context of current federal initiatives in postsecondary education. These would include the national education goals that emphasize economic development and global competitiveness[8] and an increasing emphasis on institutional accountability at the national level as demonstrated by the Department of Education's student loan default initiatives. Additional users of institution-level student outcome statistics may be identified. High school counselors could use these data to help students select a postsecondary institution. Taxpayers might use them to determine the return on their investment in publicly supported postsecondary education; or potential employers of postsecondary school completers might use information on the absolute level of, or relative gains in, knowledge and skills made by students in specific programs among the different institutions to target recruiting efforts more effectively.

Furthermore, reliable national data on degree production, time to degree, and, more importantly, the nature and quality of student learning, could facilitate the development of policies to meet regional and national manpower needs for continued economic growth.

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[5] Research and Evaluation Associates, State-Level Measurement of Performance Outcomes in Postsecondary Vocational Education, U.S. Department of Education, Office of Planning, Budget, and Evaluation, 1991.

[6] Ibid., p. 20.

[7] Ewell, P. and Jones, D.P. Assessing and Reporting Student Progress: A Response to the "New Accountability", State Higher Education Executive Officers, July, 1991.

[8] Ibid., p. 3.

If one accepts the suggestion that institution-level student outcome information is used, or can potentially be used by all postsecondary education constituents -- from participants to providers to financiers (federal, state, and local government), the obvious next step is to connect specific student outcome statistics to each of the many and varied users and uses. It is important to identify the properties each outcome statistic must have to assure its adequacy for a particular use and its meaningfulness to potential users. Unfortunately, this discussion must rely heavily on a conceptual treatment since there is little empirical evidence to support it.

Precisely which student outcome statistics should be considered in this exercise could be endlessly debated. However, the most obvious approach, and the one taken here, is to use the outcomes identified in the SRK Act (sections 103(a), 103(c) and 104 of Title I) since they are fairly diverse and encompass a wide range of outcomes.[9] Additionally, the "other institution outcomes that may be appropriate" provision permits two additional outcomes to be considered, one of which is more important in a consumer protection context, i.e., earnings of graduates/completers, and the second, which is more important from an accountability perspective, i.e., results of postsecondary assessments.

B. Necessary Properties of Student Outcome Statistics

For any statistic to have meaning, it must be a valid measure of the phenomenon it purports to describe and it must produce unbiased and consistent results. While these three criteria seem simple enough, oftentimes they are difficult and/or very costly to achieve. Indeed, many of the problems that have been identified in previous attempts to require nationwide, sub-national, student outcome reporting have resulted from shortcomings in one or more of these properties. However, even though these criteria are absolutely necessary for any statistic, they are not sufficient for all the diverse uses an outcome statistic might have.

In the context of institutional accountability, if the uses were limited to reviews of institutional operations and programs, then statistics that produce valid, consistent, and unbiased results would probably be sufficient. Further, for most state oversight agency uses (i.e., licensure decisions, funding decisions, decisions to expand or contract specific occupational programs, or identification of the need to take corrective action), having consistent, unbiased student outcome statistics that are relevant for a particular institution is, in most cases, tenable.

However, if institutions base at least a part of their self-evaluation on comparisons with peer institutions or if states make any of their program and funding decisions by comparing among institutions with similar missions, then comparability of outcome statistics targeted toward the similar missions of these "peer" institutions is necessary as well. If some states make these decisions by comparing all institutions in the state, then comparability of outcome statistics within that state is necessary, regardless of the institutional mission.

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[9] This list is comprised of institutional graduation/completion rates, graduation/completion rates by programs and academic divisions within the institution, graduation/completion rates of students with various demographic characteristics (gender, race/ethnicity, financial assistance, etc.); training related placements of graduates/completers; and the rates at which graduates/completers pass licensure or certification examinations.

From the consumer protection perspective, the comparability of institution-level student outcome statistics is necessary if students and prospective students are to have a valid foundation for choosing among postsecondary institutions. While this statement may seem axiomatic, achieving agreement on it among the various postsecondary institutional advocacy groups was difficult since it involved concurrence on the need for procedural and methodological comparability as well as definitional comparability. There was strong doubt that this level of comparability should even be attempted, given the diversity of missions, and characteristics among the postsecondary institutions in the nation. This doubt persisted even though the need for comparable information was finally recognized.[10]

Comparability of student outcome statistics among postsecondary institutions is also important for federal initiatives. In using them to assess progress toward the national postsecondary education goals, student outcome statistics must not only be comparable among postsecondary institutions but they must be comparable over time as well. For employers to use student outcome statistics to target recruiting efforts, or for states to make specific programmatic decisions, comparability of outcomes among specific programs among institutions becomes crucial.

Completeness of coverage among institutions and institutional sectors[11] in reporting comparable student outcome statistics must also be considered in determining the utility of these data.[12] Clearly, for institutional use of student outcome data, coverage is not at issue. Institutions have complete discretion in doing comparative analyses and in choosing their peers for comparative purposes. For state use, the coverage of institutions depends upon how the states use the information. Needs for coverage may vary from a single institution to all institutions in a single sector (e.g, 2-year community colleges) to all higher education institutions (2- and 4-year accredited institutions), to all institutions operating in the state.

For federal use such as the student loan default initiative, comparable outcome statistics are required from all institutions that purport to have the same mission, regardless of institutional sector. A nationally representative sample of postsecondary institutions by sector would suffice for assessing such national goals for postsecondary education as increased graduation/completion rates or better performance on tests of cognitive skills.

While the technical quality of student outcome statistics must be established, it is also important that the information provided by the data be as meaningful as possible. In judging the efficacy of an institution, both consumers and funding agencies should be aware that student outcomes are related not only to the efforts and effectiveness of the postsecondary institution, but also to the characteristics of the students in the institution. In fact, much of the research on identifying correlates of student outcomes has shown that student characteristics are a better predictor of student outcomes than institutional characteristics or processes. Thus, it is vital that contextual information describing the

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[10] This principle was expressed very clearly by representatives of postsecondary institutions at meetings to discuss the requirements of the SRK Act. See meeting summaries of March 28, 1991 and May 14,1991, in Appendix A.

[11] NCES identifies nine institutional sectors by control (public, private non-profit, and private for-profit) and level (less-than-2 year, 2- but less than 4-year, and 4-year and above).

[12] Completeness of coverage of students within a given institution is a bias and consistency issue rather than a 'coverage' issue.

institution's student population be considered in conjunction with its student outcome data. Indeed, it may be that for truly valid comparisons among postsecondary institutions, institutional outcome statistics should be adjusted to account for differences in characteristics among the students served by the institution.

C. Summary and Conclusions

Two primary uses of institution-level student outcome statistics were identified--institutional accountability and consumer protection. Other uses were identified as well. For many institutional accountability purposes, student outcome statistics that are relevant to the institution and that produce valid, consistent, and unbiased results are sufficient. However, to evaluate institutional performance against that of other institutions, comparable student performance statistics are needed at least among institutions that are being compared. To provide students, prospective students, and their parents sufficient information to make an informed decision concerning the choice of a postsecondary institution, a comparable set of student outcome indicators from all postsecondary institutions in the nation is necessary.

SECTION III

CURRENT STATUS OF INSTITUTION-LEVEL STUDENT OUTCOME REPORTING

A. Introduction

Information about the current status of student outcome data at the institutional level is important because it may answer the question of what data might be feasible for institutions to report at the present time. Clearly, if institutions already have certain student outcome data, then disclosing or reporting these data would be possible. Institutions, however, are not the only repository of institution-level student outcome data. State higher education agencies oftentimes maintain individual student records that have been obtained from institutions. Some of these agencies are able to determine relationships between the student and his/her outcome and provide feedback to institutions. Other state oversight agencies, institution and program accrediting bodies, and licensure and certification boards also may have data on student outcomes by institution, and in some cases may inform institutions of their students' performance. Therefore, information from several diverse sources was obtained to develop a more comprehensive picture of the current status of collecting and reporting student outcome data.

B. Sources of Data on Current Status

1. Institutions

An obvious source of information on the existence of institution-level student outcomes is the postsecondary institution itself. To tap this source of information, NCES conducted a Fast Response Survey of a nationally representative sample of postsecondary institutions. All postsecondary institutional sectors, from 4-year universities to for-profit trade and technical schools were represented in the sample of over 800 institutions. The questionnaire included items on three topics: what student outcome data institutions have and maintain, if any; what procedures and methods are used to gather these data and/or report the information; and to which students do these outcome data apply. (Technical information on this survey is available in appendix B.)

The NCES Fast Response Survey was framed around the student outcomes specified explicitly in section 103 (i.e., graduation rates, graduation rates by academic discipline or department within the institutions, training-related employment, and licensure pass rates). Since institutional assessment of students is not specifically mentioned for study in section 103, institutional assessment was not included as an element in the Fast Response Survey. However, the "other outcomes" provision in section 103, coupled with the current interest in postsecondary student assessment, particularly for institutional accountability purposes, warrants consideration in this report.

To obtain estimates of the number of higher education institutions that conduct student assessments, and to obtain some sense of the content of these assessments, results from the American Council on

Education's (ACE) 1990-91 survey of higher education institutions for its Campus Trends report were used.[13] This survey asked a nationally representative sample of public and private 2- and 4-year higher education institutions[14] whether they had assessment activities underway or planned, the content of the assessment, and some uses they make of the assessment data.

2. States

As mentioned above, many states maintain management information systems (MIS) on students enrolled in the state's postsecondary institutions. Information on individual students is generally obtained from each institution covered by the state MIS and is then incorporated into a central data base. For example, a state agency might receive a list of all students enrolled for the first-time in an academic year, along with characteristics of the students and an identification number for each student. The state agency might then establish a cohort[15] comprised of these students, track the students' subsequent enrollment spells for some specified period of time, and eventually determine a graduation rate for the cohort. Defining and using a cohort of students permits states to determine which and how many students who enrolled in a given year graduated. Thus, states may also be able to determine a graduation rate for an institution. They may be able to determine if a student who enrolled in one institution in the state graduated from any other institution in the state system. Other student outcome data, in addition to graduations or transfers, might be similarly handled by the state agency.

The precise data that are collected for a state system, the methodology and procedures used, the uses made of the data, the institutional coverage in the state, and the state's reporting capabilities vary considerably among the states. As a result, it was vital for this report to obtain as much information as possible about state capability for reporting institution level student outcomes.

Thus, a second source of national data on the current status of institution-level student outcome data was from state higher education agencies. In January 1991, a survey of 50 state higher education agencies was conducted by the national office of the State Higher Education Executive Officers (SHEEO). The purpose of the survey was to determine the data collection and reporting capabilities in place at the state level that would relate to institution-level student outcome data. Questions were asked concerning the specific student outcome data that were collected and reported by the state agency, if any; the methods and procedures used in collecting and reporting these data; how the data were used; and when these kinds of data were first collected.[16]

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[13] El-Khawas, E. Campus Trends, 1991, *Higher Education Panel Reports*, Number 81, American Council on Education, Washington, D.C.: July, 1991.

[14] Higher education institutions in this study refer to those institutions that are accredited at the college level by an agency recognized by the Secretary of Education.

[15] A cohort is defined as a group of individuals (students) that have a common time-bound characteristic, such as age, members of a graduating class, or members of an entering class of students.

[16] Lenth, C.S. and Russell, A. B. "Statewide Student Data Systems and Capabilities to Report Postsecondary Graduation Rates", SHEEO, 1991.

Results from another study of state agencies that had been conducted in conjunction with the reporting requirements of the Vocational Education Act of 1989 were also used as a source for this report. In 1990, the Office of Planning, Budget, and Evaluation (OPBE) in the Department of Education supported a study to ascertain the reporting capabilities of state agencies responsible for vocational education in each of the 50 states. The data were collected and a report was prepared by Research & Evaluation Associates, Inc. (REA).[17] The study attempted to answer three questions:

1. Do state vocational education agencies collect information on student outcomes? If so, what types?

2. How is information on student outcomes obtained?

3. How is information on student outcomes used?

REA relied on two types of information for their study: (1) state reports and legislation pertaining to the measurement of student outcomes for postsecondary institutions that provide vocational education; and (2) an average of five telephone interviews per state of officials in the agencies responsible for vocational education in the state. The study was limited to three categories of postsecondary institutions: public community colleges, public vocational/technical schools, and proprietary (for-profit) vocational/technical schools. Public community colleges and public vocational/technical schools were considered a single entity in states where the oversight agencies were the same.

To obtain additional detail on the specific procedures followed in reporting vocational student outcome data, NCES conducted telephone interviews of vocational oversight organizations in nine randomly selected states (Arkansas, Colorado, Connecticut, Delaware, Mississippi, Nebraska, New Jersey, Rhode Island, and Virginia). One purpose of the interview was to collect more information on how they calculate placement rates (if they, indeed, obtain and report these rates) and how they determined whether student placements were related to their training. Another purpose was to get a sense of the effect that state privacy laws might have on reporting licensure pass rates back to an institution or at an institutional level. States that did not report either placement or licensure pass rates were asked to explain the barriers they perceived in reporting these data.

3. Other Sources

While it was not possible to identify every organization that might have data on institution-level student outcomes, both state licensure boards and accrediting agencies were thought to be repositories of such information. For licensure boards, this was based on the presumption that in order to certify an individual for practice in an occupation that requires licensure, licensure boards must have a record of individuals who pass or fail required licensure examinations. Whether they also record the individual's postsecondary institution and can aggregate individuals by those institutions is not a certainty. Similarly, it was conceivable that agencies that accredit either institutions or programs within

[17]Research and Evaluation Associates, State Level Measurement of Performance Outcomes in Postsecondary Education, Volume 1: Executive Summary, An Overview of State Policies, Contractor Report, U.S. Department of Education, Office of Planning, Budget, and Evaluation, 1990.

institutions might require student outcome data as part of the criteria for initial accreditation or for renewing accreditation. If this were the case, then accredited institutions or programs would have these data available.

To get a sense of whether these suppositions were realistic, NCES conducted telephone interviews with licensure board personnel for five professions: Accounting, Cosmetology, Real Estate, Architecture, and Nursing. Although the limited number of licensing agencies is not representative of all licensing agencies in the nation, it was felt that these interviews would provide some insights into whether there were consistent practices among licensing boards in their interactions with postsecondary institutions, both across areas of responsibility and across states.

Of particular interest, was what feedback, if any, licensing boards provide to graduating institutions regarding the performance of their students on licensing examinations. Do they generally compute pass rates on an institution by institution basis? If so, how do they compute them? Do they report them to the institution or to the general public? If not, do they report individual student performance to the graduating institution? Additional questions ascertained the level of concern with individual privacy issues, and the difficulties involved in state licensure boards' providing pass rate data to institutions.

Accreditation in postsecondary education is a voluntary process of quality evaluation. In 1987, there were fourteen institutional accrediting bodies recognized by the Department of Education as accrediting institutions of higher education. Nine of them were regional associations that accredit institutions and five of them were national associations that accredit types of institutions. There were an additional 100 specialized agencies that accredit occupationally oriented postsecondary education programs. In developing an accreditation process, accrediting organizations generally establish standards that may involve measuring the outputs and/or outcomes of the program, even, perhaps, student outcomes that can be tied to participation in the institution's programs.

NCES contacted a few institutional and program accrediting organizations to determine if accrediting agencies, as a general rule, require student outcome statistics from institutions or programs as part of their standards for accreditation and evaluation.

C. An Assessment of the Current Status of Institution-Level Student Outcome Data

1. Institutional Capability for Reporting Student Outcomes

Results from the NCES Fast Response Survey of institutions indicate that 79 percent of all postsecondary institutions in the country can report a graduation/completion rate. Among 4-year schools, 83 percent of public and 74 percent of private non-profit institutions can report a graduation/completion rate. Additionally 64 percent of public 2-year institutions and over 80 percent of for-profit schools can report this statistic (table III-1).

Of the almost 8,000 schools that can report this statistic, over 80 percent indicated they could report graduation/completion rates by gender, attendance status, and final major field of study; about two-thirds could report by race/ethnicity, age, initial major field of study, and residency status; while over

Table III-1.--Percentage of postsecondary institutions that can report graduation/completion rates and the percentage of these that can report by specified student characteristics, by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Number of institutions*	Estimated enrollment	Can report graduation/ completion rate	Student characteristics											
				Gender	Race/ ethnicity	Age	Attendance status	Initial major field of study	Final major field of study	School or academic division	Athletic financial aid status	General financial aid status	Residency status	Remedial course work	Other
Total	9,933	14,686,914	79.1	83.6	64.5	68.8	82.5	66.9	84.2	56.5	8.5	59.2	68.2	31.7	3.7
Public	2,055	11,062,424	72.9	92.5	88.2	74.2	68.3	66.0	85.6	66.0	26.9	59.5	77.8	60.9	5.4
4-year-and-above	577	5,805,397	82.8	96.0	95.0	71.3	62.6	73.9	86.0	78.0	53.1	50.7	79.7	50.4	5.3
2-year	1,195	5,093,426	63.6	92.2	90.7	75.6	70.1	57.2	89.3	63.8	19.7	62.5	78.8	70.5	3.7
Less-than-2-year	284	163,601	91.9	86.5	68.5	75.6	73.4	77.5	73.7	50.1	0.0	67.0	71.3	52.3	10.7
Private nonprofit	2,548	2,902,128	77.4	88.5	78.1	72.3	79.2	59.5	85.5	65.1	12.8	51.4	64.4	27.6	2.7
4-year-and-above	1,542	2,729,599	73.6	91.5	81.2	69.4	73.5	49.0	85.2	65.0	19.2	48.9	63.0	24.3	3.0
2-year-and-below	1,006	172,529	83.2	84.5	73.9	76.3	87.0	73.6	86.0	65.2	4.1	54.7	66.2	32.0	2.2
Private for-profit	5,329	722,392	82.3	78.4	50.3	65.4	88.8	70.5	83.1	49.5	0.3	62.6	66.6	23.5	3.5
2-year-and-above	913	314,617	84.3	70.5	43.7	52.8	85.2	80.4	92.5	55.1	1.6	57.5	57.7	18.3	0.0
Less-than-2-year	4,417	407,775	81.9	80.1	51.7	68.1	89.5	68.3	81.1	48.3	0.0	63.7	68.5	24.6	4.3

*This is the number of institutions in the 50 States and the District of Columbia that met the criteria for inclusion in the NCES postsecondary institutional universe in the fall of 1990.

NOTE: Percentages by specified student characteristics are based on institutions that can report graduation/completion rates.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

one-half could report them by school or academic division within the institution and the student's general financial aid status. Table III-1 presents these data by level and control of institution. While there is some variation among sectors, there are not many large disparities between a specific sector and the average for all institutions.

These results indicate that most institutions can disclose or report graduation/completion rates and report them by students' personal characteristics (gender, race/ethnicity, age), and enrollment characteristics (major field of study, especially final major field of study, attendance status, and residency status). However, less than half of all institutions could report them by financial aid status or school or academic division within the school.

In addition to the capability for reporting graduation/completion rates, the survey also explored institutional capability for reporting the other institution level student outcomes specified in section 103. Interestingly, 80 percent of all institutions reported being able to determine employment outcomes for graduates/completers. This percentage varied considerably by institutional sector, however (table III-2). About half (52 and 55 percent) of public and private non-profit 4-year institutions reported this capability. The majority of the institutions determined employment outcomes, primarily through sample surveys of graduates/completers (53 percent reported using this specific methodology). Nineteen percent of public institutions reported determining employment outcomes through state record systems.

Fifty-eight percent of all institutions reported being able to determine if graduates/completers obtained necessary or appropriate licenses or certifications (table III-3). However, this also varied by institutional sector. Four-year institutions (public and private nonprofit) and 2-year and above proprietary institutions were generally less likely to have this capability than other types of institutions (table III-3). Twenty-eight percent of institutions that determined licensure or certification outcomes for graduates/completers surveyed a sample of graduates, and 51 percent obtained this information through state record systems. Surprisingly, the percentage of institutions that used state record systems did not vary appreciably between public and private institutional sectors.

Section 103 of the SRK Act requires that institutions consider a student as a completer if the student transfers to another eligible institution for which the enrolling institution provided substantial preparation. To gauge institutions' ability to include transfers in their graduation/completion statistics, institutions were asked if they could determine if a student had actually transferred from their school to another institution. Of the institutions that could report graduation/completion rates, only 15 percent said they could determine an actual transfer to another in-state institution; 14 percent said they could determine a transfer to another in-state private institution; and 12 percent reported they could determine a transfer to an out-of-state institution (table III-4). Thus, of all statistics specified in section 103 of the SRK Act, transfers to another institution seemed to be the least available and most problematic for the vast majority of institutions.

Table III-2.--Percentage of postsecondary institutions that can determine employment outcomes for graduates/completers by method of collection and by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Number of institutions*	Estimated enrollment	Determine employment outcomes	Method of collection		
				Sample survey of graduates	State record systems	Other
Total	9,933	14,686,944	79.6	52.9	9.2	9.8
Public	2,055	11,062,424	68.8	67.0	19.1	6.2
4-year-and-above	577	5,805,397	51.7	79.8		8.6
2-year	1,195	5,093,426	74.5	72.7	24.1	5.0
Less-than-2-year	284	163,601	79.8	27.9	24.5	8.1
Private nonprofit	2,548	2,902,128	64.4	53.7	1.1	14.4
4-year-and-above	1,542	2,729,599	54.7	67.5	1.8	9.8
2-year-and-below	1,006	172,529	79.1	39.1	0.4	19.2
Private for-profit	5,329	722,392	91.0	48.5	9.1	9.3
2-year-and-above	913	314,617	86.4	46.0	0.6	8.1
Less-than-2-year	4,417	407,775	92.0	48.9	10.7	9.6

*This is the number of institutions in the 50 States and the District of Columbia that met the criteria for inclusion in the NCES postsecondary institutional universe in the fall of 1990.

NOTES: Percentages by method of collection are based on institutions that can determine employment outcomes. Percentages do not add up to 100 because respondents were able to choose more than one option.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43. 1991

Table III-3.--Percentage of postsecondary institutions that can determine if graduates/ completers obtained necessary or appropriate licenses or certifications, by method of collection and by control and level of institution: 50 States and and the District of Columbia, 1991

Control and level of institution	Number of institutions*	Estimated enrollment	Determine necesary/ appropriate licenses	Method of collection		
				Sample survey of graduates	State record system	Other
Total	9,933	14,686,944	58.1	27.6	50.8	13.2
Public	2,055	11,062,424	63.9	38.2	51.4	13.0
4-year-and-above	577	5,805,397	38.4	42.6	58.4	10.3
2-year	1,195	5,093,426	71.9	42.7	48.0	11.7
Less-than-2-year	284	163,601	81.5	17.6	57.3	20.3
Private nonprofit	2,548	2,902,128	46.1	24.1	45.3	31.0
4-year-and-above	1,542	2,729,599	35.3	46.3	28.3	22.0
2-year-and-below	1,006	172,529	62.6	4.9	59.9	38.9
Private for-profit	5,329	722,392	61.5	24.5	52.6	6.9
2-year-and-above	913	314,617	39.8	26.1	47.4	14.6
Less-than-2-year	4,417	407,775	66.0	24.4	53.3	6.0

*This is the number of institutions in the 50 States and the District of Columbia that met the criteria for inclusion in the NCES postsecondary institutional universe in the fall of 1990.

NOTES: Percentages by method of collection are based on institutions that can determine employment outcomes. Percentages do not add up to 100 because respondents were able to choose more than one option.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table III-4.--Percentage of postsecondary institutions able to determine completion/graduation rates and able to track transfer students to the transfer institution, by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Number of institutions*	Estimated enrollment	Can report graduation/ completion rates	Type of institution transferred to		
				In-state public institutions	In-state private institutions	Out-of-state institutions
Total	9,933	14,686,944	79.1	14.6	14.3	12.4
Public	2,055	11,062,424	72.9	23.2	11.0	8.5
4-year-and-above	577	5,805,397	82.8	9.6	2.0	2.0
2-year	1,195	5,093,426	63.6	36.5	17.4	12.3
Less-than-2-year	284	163,601	91.9	9.2	90.2	9.2
Private nonprofit	2,548	2,902,128	77.4	11.7	12.2	11.7
4-year-and-above	1,542	2,729,599	73.6	9.1	9.9	9.1
2-year-and-below	1,006	172,529	83.2	15.3	15.3	15.3
Private for-profit	5,329	722,392	82.3	13.0	16.4	14.0
2-year-and-above	913	314,617	84.3	7.4	7.4	6.1
Less-than-2-year	4,417	407,775	81.9	14.1	18.3	15.7

*This is the number of institutions in the 50 states and the District of Columbia that met the criteria for inclusion in the NCES postsecondary institutional universe in the fall of 1990.

NOTES: Percentages by type of institution transferred to are based on institutions that can report graduation/completion rates. Percentages do not add to 100 because respondents were able to choose more than one option.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Results from the ACE survey of higher education institutions (an identifiable subset of postsecondary institutions) concerning their assessment of student learning indicate that 72 percent of all non-specialized higher education institutions that serve undergraduate students assess the basic college-level skills of their students. Ninety percent of public 2-year institutions, 64 percent of public 4-year institutions, and 58 percent of all (2- and 4-year) private, non-profit schools reported having basic skills assessment. An additional 17 percent planned such an assessment. Thirty-five percent of the higher education institutions reported testing for knowledge in general education subjects or in a major field; 24 percent reported assessment of higher order skills in critical thinking, 32 percent in quantitative problem-solving, and 56 percent in writing. Significantly, another 30 to 40 percent planned higher order skills assessments.[18]

Among public institutions that are required to submit assessment data to a state agency (25 percent of all higher education institutions), almost 75 percent reported their assessment information was made public and 71 (18 percent of all higher education institutions) percent feel the assessment information is comparable across institutions.[19] More detailed results and technical notes regarding this survey are available in Appendix C.

2. State Capability for Reporting Student Outcomes

a. State Higher Education Agencies[20]

Thirty-nine state higher education agencies (including Puerto Rico) either have , are developing or are planning to have the capability to report graduation rates for postsecondary students. Of these, 19 presently report graduation rates, 8 have a system in place and are developing the capability to report, and 12 are developing the capacity to within the next few years.

The information collected and the analytic capabilities of the systems also vary from state to state. Of the 39 states with current or planned reporting capability, 28 states can or will soon be able to report graduation/completion rates across all in-state, public 4-year institutions. Twenty-two states can or will soon be able to report graduation/completion rates for the entire public state/system. Thirty-four states can or will report comparative rates by race/ethnicity, 33 by sex, 26 by age and attendance status (full-time, part-time), 28 by residency status, 21 by high school of origin, 16 by participation in remedial coursework, 11 by general financial aid status, 9 by athletic aid status, and 3 by income.

The number of states reporting rates by field and by school/program within an institution is 27 and 6, respectively. Regarding whether and how states measure "other outcomes", only 5 states report post-graduation outcomes (such as employment) using follow-up surveys, and only 1 state uses state employment data.

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[18] El-Khawas, Campus Trends, 1991, op. cit., p. 38.

[19] Ibid., p. 39.

[20] Lenth and Russell, op. cit.

b. State Vocational Education Oversight Agencies[21]

Oversight of the 2-year and less-than-2-year vocational institutions (public community colleges, public vocational or technical schools, and for-profit vocational/technical schools) varies considerably from state to state. In only eight states are all three types of institutions the responsibility of the same agency. As a result, the level of involvement of state vocational education oversight agencies in collecting, maintaining, and/or reporting student outcome data is probably different for public sector schools (2- and less-than-2-year institutions) and for-profit vocational/technical schools.

Of the outcomes specified in section 103(c) of the SRK Act, 46 community college and public vocational/technical school oversight organizations reported collecting graduation/completion data. These 46 state agencies represent about 90 percent of all public postsecondary institutions with vocational programs in the 50 states and the District of Columbia. However, only 34 of these 46 organizations reported actually computing a graduation/completion rate. Thirty-three state agencies reported collecting placement data for public postsecondary school vocational completers. Twenty-seven of these agencies, representing 46 percent of public 2-year and less-than-2-year schools, collect data on training-related placement, although the methodology for collecting these data varies somewhat among states. Only 12 state agencies reported collecting licensure information. Therefore, only about one-third[22] of public schools with vocational programs would have these data available through a state agency.

Regarding other outcomes, 21 state agencies collect earnings information on public postsecondary vocational school completers and 13 measure gains in basic skills. These represent 37 and 32 percent of public 2- and less-than-2-year institutions, respectively.

Twenty-nine state oversight organizations of for-profit vocational/technical schools collect completion data, 21 collect placement data, and 12 collect data on training-related employment. These agencies represent 80 percent, 62 percent, and 26 percent of the for-profit vocational/technical schools in the country. Agencies in two states representing about 11 percent of for-profit schools collect licensure information. Only 19 state agencies compute a graduation/completion rate for students in for-profit vocational technical schools. Very few other student outcomes are considered for these types of institutions. Only three state agencies collect earnings information for completers of for-profit vocational schools, and then only when they are used in advertising. Again, however, comparability is a problem because of definitional differences among the states.

c. Licensure Boards

There was little consistency in the way the different states and individual licensing boards that were interviewed by NCES approached reporting examination passage data to postsecondary institutions. Many of the differences among states were due primarily to differing priorities within the state.

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[21] Research and Evaluation Associates, State-level Measurement, op. cit., p. 7.

[22] The number of institutions was derived by determining the number of public schools with vocational programs in the 12 states that reported collecting licensure pass rate information.

Several states permit the reporting of a pass rate on state licensure exams by institution, but not by individual student, or by any characteristics that could identify individual students, e.g., gender or race. Other states, such as Mississippi, allow reporting to institutions of the individual student's pass/fail status. In this situation, institutions could conceivably calculate pass rates.

With regard to the practices of individual licensing boards, some relied on testing services or national licensing boards to administer licensing tests and calculate institutional pass rates based on test takers. For example, a national board, the National Association of State Boards of Accountancy (NASBA), administers exams to prospective accountants, and calculates pass rates by institution, among other statistics. NASBA then makes this information available to the public in book form.

In architecture, all of the nine state boards used the Educational Testing Services (ETS) examination that is administered through the National Council of Architectural Registration Board (NCARB). NCARB compiles aggregate statistics based on test results reported by ETS and reports the results by graduating institution back to the state. The state boards, on the other hand, do not necessarily report back to institutions within the state. When asked about this, several boards cited limited resources. Others said that the NCARB took care of statistics.

The reporting practices of state licensure boards of realtors vary considerably. The Realtor Licensing Examination is generally administered by a national contract agency. This agency provides statistics to both state licensing boards and to institutions. State licensing boards receive aggregate pass/fail statistics for each institution, but the institutions only receive their mean score and its standard deviation. Few state boards calculate or report institutional pass rates because of resource constraints. One state does not require individuals to take courses in order to sit for the realtor's exam, and thus institutional pass rates are not considered meaningful. Only one state surveyed calculated and provided pass rates by institution on the realtor examination.

State licensure boards of cosmetologists are typically under the jurisdiction of the Department of Health, and they generally maintain institutional pass rates and report them back to institutions. Privacy was a concern, but it was overridden by the pervading belief among these boards that schools already know the grades and academic caliber of their students and pass rates would not provide any new or confidential information. The states that do not report pass rates generally cited limited resources as a constraint. State licensing boards for nurses are also typically under the jurisdiction of the Department of Health. All state nursing licensure boards questioned said that they report and maintain pass rates by institution.

In summary, there are a significant number of different licensure examinations that are required of postsecondary education completers and there is tremendous variation in the way the different occupations/professions and states handle pass rate information. As a result, in multi-program postsecondary institutions, licensure pass rates would have to be obtained from multiple sources. Further, many states have state privacy laws that prevent boards from releasing information pertaining to an individual student. Some boards obtain release statements from students, and thus are able to release pass rates by student. As a general rule, however, boards that report pass rates by institution do so in aggregate and thus are within the limits of state privacy laws.

Additionally, it would seem that boards that already calculate pass-rate statistics probably would be able to provide that information to schools. Boards that do not calculate the statistics will find it burdensome to do so, although those professions that have national coordinating councils or national licensing boards that administer the test will find it less burdensome to provide this information than individual boards within a state.

d. Accrediting Agencies

NCES contacts with a limited number of accrediting agencies revealed that most accrediting organizations are sympathetic to budget constraints and simply ask for "reasonable evidence" of positive student outcomes. However, an institution or program unable to provide such evidence might still be accredited if everything else were in order. Accrediting organizations tend to believe that student performance outcomes do not necessarily separate good institutions from bad institutions. A representative of a regional accrediting organization expressed the opinion that student outcome statistics for accrediting purposes were meaningless because they were not necessarily comparable across institutions. He felt this was especially true for regional accrediting agencies that accredit institutions in several states and standardization of these statistics in public institutions across states is unlikely. Thus, the organization does not require institutions to collect or report outcome statistics as part of the accreditation process.

Vocational and occupational program accrediting agencies were more likely than institutional or professional program accrediting agencies to collect outcome statistics. The National Accrediting Commission of Cosmetology Arts and Sciences, for example, has integrated an analysis of outcome measures into the overall process of accreditation by collecting information on the completion, placement and licensure rates of students via an Annual Report, that is due from the school to the Commission on December 31 each year, and by requiring all schools to disclose these rates to prospective students. To calculate graduation rates, the Commission uses an approach that traces graduates backward to determine when they started rather than tracking beginning students, and placements are calculated as a percentage of completers.

Similarly, the Commission on Occupational Education Standards of the Southern Association of Colleges and Schools has a standard matrix that it requires institutions to complete as part of the accreditation process that includes outcome measures. However, neither of these two agencies require validation of the outcome data. Thus, the accuracy of such statistics is unknown.

D. Summary and Conclusions

There seems to be an unexpectedly large number of institutions that maintain and report student graduation/completions rates, and employment statistics on their completers. Fewer, but still a surprisingly high percentage of institutions determine licensure pass rates for their completers. Additionally, most state agencies collect graduation/completion data, and many can determine the graduation/completions rates of primarily public institutions in their state. States, on the other hand, do not tend to collect employment-related outcomes, except for completers of public postsecondary occupationally specific programs.

The apparent availability of institution-level student outcomes suggest that nationwide reporting of some institution-level outcome statistics might be possible, whereas others would not be possible. The suggestions are summarized below.

(1) Graduation/completion rates of undergraduates based on receipt of degree or on meeting all programmatic requirements for the degree would be possible. Additionally, these could probably be reported by static characteristics of the student such as gender, race/ethnicity, age, final major field of study, attendance status at time of completion, financial aid status, and residency status as well as by academic division within the school.

(2) Determining transfers from the enrolling institution to another is not possible for the enrolling postsecondary institution.

(3) Employment outcomes of graduates/completers (training-related employment, earnings) are also possible, especially for vocational/occupational programs in public institutions. These statistics are less available for public or private 4-year institutions.

(4) Assessments of students' college level basic skills are possible at least for those undergraduates enrolled in 2- and 4-year higher education institutions. (These do not include the vast majority of private, for-profit institutions.) Assessment of higher order cognitive skills is not likely.

(5) Passage rates on licensure/certification examinations would be possible for very specific fields and/or single program institutions. For institutions with several diverse programs that require licensure or certification, an institution-level pass rate is not a meaningful statistic, and cannot be readily be determined.

It must be reiterated and emphasized that these possibilities are based entirely on the current prevalence of student outcome statistics. They do not address the quality of the data that are currently available, nor do they address the utility of currently available institution-level student outcome data for any of the purposes noted in the previous section. These very critical issues are considered in the following section.

SECTION IV

PROBLEMS WITH INSTITUTION-LEVEL STUDENT OUTCOME REPORTING

A. Introduction

Determining what institution-level student outcome data are currently and generally available was a critical element in the process of examining the feasibility of reporting nationwide institution-level student outcome data. It provided some clues about what data might be feasible at a national level after some development has occurred. That is, it might be postulated that if some institutions are collecting and reporting particular data, then all institutions could collect and report those data. On the other hand, simply knowing that some number of institutions and/or states have and even report some data, provides no indication of the quality of that data (i.e., its validity, consistency, or lack of bias). Nor does it provide a sense of the utility of the data for specific uses, or the cost of collecting them.

It is not possible within the scope of this report to evaluate the quality of the student outcome data that are maintained by individual institutions, or even by each of the states that report having these data. This would entail having detailed knowledge of the specific definitions as well as an understanding of the procedures and methodology used in collecting the data. It is possible, however, to get a sense of the quality of some types of outcome data by reviewing past attempts to collect or regulate student outcome data at a national level. This is presented in part B of this section. In addition, data obtained from the NCES survey of postsecondary institutions concerning definitions and methods used to report student performance data and information from case studies of states' student performance data collection efforts will provide some insights into the problems involved. In terms of the utility of available student outcome data, institution-specific definitions and procedures that produce good quality data are adequate and appropriate for the individual institution's self-evaluation. They are probably adequate as well for most state and other institution needs for student performance data to determine accountability.

For consumer protection purposes, however, while it may be argued that some information is better than no information, non-comparable or incomplete information is probably worse than no information at all because it could lead to inadvertently false choices. Thus, part C of this section will address, as directly as possible, the two characteristics that make student outcome data useful for consumer protection purposes: comparability and completeness.

B. Previous Attempts to Collect Nationwide Student Outcome Data

While efforts to collect institution-level student outcome data are extant in many of the states (see section III B), only three remotely related efforts at the national level were identified. These were the Vocation Education Data System (VEDS), and the attempts of the Federal Trade Commission, and then the Department of Education's (ED) Office of Postsecondary Education to require institutional disclosure of student outcome information. All three of these efforts were reviewed for this report by abstracting internal documents and conducting interviews with knowledgeable persons concerning: (a)

the implementation, results, and subsequent suspension of VEDS; (b) the Federal Trade Commission's attempts to require postsecondary institutions that operate for profit (i.e., proprietary institutions) to disclose graduation rates and rates of training-related placements for completers; and (c) the publication and suspension of the ED's Track Record Disclosure regulations.

1. The Vocational Education Data System (VEDS)

The Education Amendments of 1976 mandated the development, implementation, and operation of a national vocational education data reporting and accounting system (P.L. 94-482, section 161). In response to this requirement, the Vocational Education Data System (VEDS) was developed and implemented by NCES. The 1978-79 school year was the first year of data collection. VEDS was to include data on enrollments in occupationally specific programs, information on programs offered, numbers of program completers and leavers, and vocational education staff, facilities, and expenditures. The system was also to include the results of mandated state evaluations of vocational programs, reporting the extent to which program completers and leavers--

"i. find employment in occupations related to their training, and

ii. are consideration by their employers to be well trained and prepared for employment" (P.L. 94-482, section 112).

VEDS was developed as a state-level reporting system and no individual institutions were identified through VEDS at the national level. Rather, states had the responsibility for aggregating data concerning vocational education programs and students from all institutions that received federal vocational education program dollars in the state. States could collect the data at a state level through a state-level student unit record system or aggregate individual institutional reports for submission to NCES.

State agencies responsible for VEDS data felt their most significant problems resulted from: (1) attempts to link individual student data that were collected at different points in time or at different administrative levels; and (2) reporting student data by detailed program characteristics (e.g., instructional setting, legislative purpose). The problems with linking data were reported to be less severe in states that had student unit record systems at the state level. Even these states, however, had problems with linking completer/leaver and employer follow-up data to student enrollment data.[23]

To obtain data that would satisfy section 112 of the Education Amendments of 1976, states or institutions surveyed completers through a mail questionnaire that was generally unique to each state or even each institution. The questionnaire sought information on the completer's employment status, educational status, and/or military status. For employed completers, it attempted to ascertain if their job was related to their training. States aggregated the data from this survey for submission to NCES. For respondents to the student survey who indicated a related job placement, states or institutions would survey employers to obtain information on employer satisfaction with the student's on-the-job performance.

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[23] A National Assessment of Methodology and Data Quality in Reporting Vocational Education Data mandated by P.L. 94-482, NCES Contractor Report prepared by InterAmerica Research Associates, Inc., 1983.

The VEDS experience concerning completer and employer follow-up data (i.e., reporting the extent to which program completers find employment in occupations related to their training, and are considered by their employers to be well trained and prepared for employment) provides valuable information about the feasibility of institutions' disclosing training-related employment outcomes of graduates/completers. It also addresses whether employer satisfaction with completers/graduates might be one of the "other" feasible outcome measures mentioned in section 103 of the SRK Act.

In an attempt to gain insights into the quality of the data reported on the 1978-79 VEDS reports of student outcomes and employer satisfaction, NCES determined the response rates of both the student follow-up and the employer follow-up surveys.[24] Response rates are good preliminary indicators of data quality, for without adequate levels of response, other aspects of data quality are, for the most part, moot.

Three elements went into determining the response rate at the national level in the VEDS follow-up surveys. The first element was the number of entities (states) that submitted follow-up data to NCES relative to the total number that had programs. The number of entities that had programs was determined from the 1978-79 enrollment report, and the number of entities that submitted student follow-up surveys was determined from the follow-up reports. Eighty-two percent of the 45 entities with postsecondary vocational completers reported completer follow-up data.

The second element in determining the response rate in the VEDS follow-up surveys was the response rate of completers to the follow-up questionnaire sent by the states or individual institutions to determine the completer's employment status. This rate was estimated, using summary data provided by the states, by calculating the ratio of the total number of students who were reported in each of the five employment status categories that suggested a response (employed in a related field, employed in an unrelated field, pursuing additional education, unemployed, not in labor force) to the total number of completers reported in the follow-up. The response rate for postsecondary completers was 71 percent. When state non-response was considered in conjunction with student non-response in determining effective response rates for postsecondary completers, the effective response rate declined to 58 percent.

The third element for determining the response rate in VEDS follow-ups was the response rate of the employer follow-up. As noted, the employer follow-up was conducted only for respondents who indicated they were employed in a field related to training. In addition, it was possible to survey employers only if students reported the name and address of their employers on their questionnaire. Thus, there was a pervasive question as to what constituted the universe for the employer follow-up. Was it all students in a related employment, or was it only those students in a related employment that reported employer name and address?

Detecting the percentage of respondents that supplied an employer name and address was not possible for the 1978-79 collection year. In the 1979-80 collection year, states were instructed to provide the

[24] Internal NCES memo, May 1983.

number of completers and leavers that reported an employer name and address. For those 10 states that reported these numbers, an estimated 71 percent of students in a related employment supplied an employer name and address. Using the data from these 10 states, a rough estimate of employer response rate was found to be 55 percent.

Using these rough estimates, it was possible to determine the effective response rate on the employer follow-up by using the effective response rate for postsecondary completers (58 percent), the proportion of students that supplied an employer name and address (71 percent), and the response rate of employers (55 percent). Combining these factors yielded an effective response rate for employers of 23 percent.

2. The Federal Trade Commissioner Regulations on Student Outcomes

For many years the Federal Trade Commission (FTC) contemplated requiring proprietary vocational and home study schools to disclose graduation and job placement information to prospective students. On December 28, 1978, the FTC issued a final regulation requiring these schools to do so.[25] This regulation, however, never became effective because the Second Circuit of the U.S. Court of Appeals set it aside. Although FTC staff considered issuing a new regulation designed to meet the Court's concerns, the FTC decided against it.

The regulation was designed in part to address a concern that prospective students were not receiving useful information about student outcomes in the programs in which they were considering enrolling. Schools were required to disclose information, by program, about graduates from the prior academic year on a specific form. Schools were allowed to deviate from using this form only under circumstances specifically cited in the regulation.

The FTC regulation required schools to disclose the following information regarding program completion:

- the number of students enrolled;
- the number and percentage of students who graduated; and
- the number and percentage of students who failed to complete.[26]

In addition, this regulation required schools to disclose the following information about placement and earnings of graduates 4 months after successful completion of the program if the school promoted the program by making job placement or earnings claims:

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[25] Federal Trade Commission., Proprietary Vocational and Home Study Schools, Trade Regulations and Rules, *Federal Register*, Vol. 43, No. 250, 1978, pp. 60796-60813.

[26] The regulation provided slightly different formats for correspondence programs and programs that had no fixed schedule of enrollment.

- o the number of students who graduated;
- o the number and percentage of graduates who got jobs in the field for which the school trained them;
- o the number and percentage of graduates who earned different salary levels, by increments of $2,000; and
- o the number and percentage of students who refused to provide salary or earnings information.

The regulation did not allow any additional information to be included in the same mailing with the job information.

On December 12, 1979, approximately 1 month before the regulation was scheduled to become effective, the Second Circuit Court of Appeals struck sections of the regulation, including the job placement disclosure provision. Although the Court believed that the information about job placements would be accurate, the Court argued that the absence of additional information could render the information false or deceptive. In its decision, the Court's majority opinion specifically stated:

> No other job placement information may be contained in the same envelope. The school may not show how many students could not be contacted or did not respond to job placement inquiries. It may not disclose how many of them did not seek jobs within four months after graduation because of marriage, pregnancy, prior employment, self-employment, continued schooling, or other reasons. Proof in the record shows that adherence to the Commission's Rule would require one school to show a job placement rate of 5.8%, when in fact the true employment success rate of those who responded to the school's inquiry was 54%, or 80% if those who became self-employed were included.... Nonetheless, each school must content itself with the same anemic caveat quoted in the margin and the privilege of sending additional information in other mailings.[27]

That caveat is a statement schools were allowed to use to explain their placement rate:

> In evaluating our record, remember not all of our students took this course to get a job in the field of ___. Also we were unable to reach some of our students to see if they got jobs. So, our placement percentage might be understated.[28]

The Court ruled that the disclosure of information on student retention was appropriate for deterring unfair and deceptive trade practices. In addition, it stated that schools possess dropout statistics and that they can be accurately stated.

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[27] Katherine Gibbs School et al v. FTC, 612 f.2d 658, p. 666.

[28] Ibid., p. 666.

The opinion of the Second Circuit Court of Appeals, however, was not unanimous. The dissenting opinion supported the FTC's decision to require the disclosure of job placement information in the specified format, stating, in part:

> The majority refers to one instance where the Commission's Rule requires a school to report, truthfully, that the known job placement rate is 5.8%, whereas what the majority calls "the true employment success rate of those who responded" was 54%. There are two reasons why it is highly misleading to call this 54% a "true employment success rate." First, as the majority acknowledges, but as schools rarely do, this rate is based only on those who responded to the school's inquiry, The majority's example is a television servicing school that had 2,271 graduates, of whom only 929 responded to the job-placement inquiry. Neither the majority, the school, nor prospective students who may have read the school's advertisement have any reason to think that the placement rate for the more than half of the graduates who did not respond is anywhere near as high as for those who did.
>
> Secondly, as the majority fails to acknowledge, the 54% success percentage is not based on all the 929 graduates who responded, but only on the 244 of these (26%) who reported that they were seeking full- or part-time jobs. Again, neither the majority, nor the school, nor prospective students have any way of knowing how many of the 685 students not seeking jobs dropped out of the labor market because of the difficulty of finding a job or because the course left them woefully unprepared to handle one.[29]

Both opinions reveal the difficulty of determining how to calculate job placement rates. Assuming that the disclosure of these rates affect consumer behavior, how job placement rates are defined could have a great deal of impact on consumer behavior. The job placement rate of a single program could vary from as low as 5.8 percent to as high as 80 percent based on how it was defined.

3. Experience With Track Record Disclosure Provisions

The Department of Education's Consumer Disclosure Provisions [34 CFR 668.44 (c)-(f)] required 2-year community colleges, private for-profit vocational schools, and other schools with sub-baccalaureate vocational programs to disclose to prospective students the completion rates, placement rates, and state licensing exam pass rates for occupationally-specific vocational programs. The problems schools experienced in complying with these regulations provide additional insights into institutional collection and reporting of student outcome statistics.

Results from a survey of associate degree-granting institutions concerning these regulations[30] indicated that only 50 percent of respondents reported their institutions to be in compliance with them. Further, the substantial variation in the way respondents interpreted the regulations led to estimates that the true

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[29] Ibid., p. 680.

[30] Fox, Richard M. Implementation of the Student-Right-to-Know and Campus Security Act: What We Can Learn from Experiences with Track Record Disclosure Requirement, City University of New York, 1991.

compliance rate was closer to 30 percent. (In interpreting the results of this study, it must be noted that only 39 percent of the institutions contacted for participation responded to the survey.[31])

The major problems with the regulations centered around the fairness of requiring these disclosures only from schools with sub-baccalaureate vocational programs; the difficulties with, and cost of compliance; the lack of definitional specificity for required statistics;[32] the inherent difficulty of collecting reliable and meaningful placement information; the accuracy of the statistics generated; and the potential usefulness of the information.

Some of the specific difficulties identified included: the burden and expense of extracting and compiling the information from manually maintained files; schools that did not maintain the required information could not comply with the regulations in the time required; and institutions with several programs covered by the regulations found it impossible to track completion and placement rates for all of their programs, especially if their record systems were manually maintained. Furthermore, the problems of reporting statistics by specific program were amplified for two reasons. First, many institutions had difficulty determining exactly what constituted enrollment in a specific program of study; and second, students changed from one program to another making it difficult to track performance in the original course of study.

The cost of complying with the Track Record Disclosure Regulations was estimated at around $8,000 per institution.[33] This raised the question of the prudence of committing scarce resources to provide consumer information unless it can be determined that such information is accurate, fair, and useful to consumers.

The open-ended approach to definitions and procedures taken in the regulations was disconcerting to institutions that were attempting to make good faith efforts to comply. Moreover, it meant that consumers were probably not being provided with comparable statistics. To illustrate the extent of the variability, 22 distinct definitions of a cohort were identified among 56 institutions that tracked cohorts.[34]

Difficulties also surfaced among schools attempting to collect training-related placement data. The most popular method of determining placement involved surveys of graduates. These suffered from low response rates and data inaccuracy. Furthermore, determining exactly what constituted a training-related placement was a relatively subjective process that was differentially applied among institutions.[35]

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[31] Ibid.

[32] Ibid., p. 4.

[33] Ibid., p. 7.

[34] Ibid., p. 10.

[35] Office of Student Financial Aid, U.S. Department of Education, Consumer Disclosure Briefing for OERI, March 14, 1991.

The regulations were suspended by the Student Right-to-Know Act, although schools that publicly make a claim about job placement rates must still abide by other disclosure provisions in the Higher Education Act (section 487(a)8).

C. Other Identified Problems

In section III it was reported that a significant number of institutions have student outcome statistics available, especially graduation/completion rates. Having outcome statistics available, however, does not necessarily imply that the data meet the most important criteria for consumer protection use -- that is, it does not imply they are comparable among institutions or institutional sectors.

To address the issue of comparability, several questions were asked of institutions in the NCES Fast Response Survey concerning the methodology institutions use in determining graduation/completion rates. Responses to these questions provide national estimates of the incidence of relatively comparable procedures and definitions among institutions.[36] How these procedures are actually implemented, however, cannot be surmised.

There appears to be some degree of similarity in the methods used for determining a graduation/completion rate. Seventy-nine percent of all postsecondary institutions could report a graduation/completion rate. Of these, about 71 percent (56 percent of all institutions) report following an entering class from initial enrollment to graduation/completion to determine their rate. However, less than one-half (46 percent) of the 64 percent of the public 2-year institutions that report graduation/completion rates seem to use this methodology. Public 2-year and less-than-2-year schools were more likely to retrospectively trace back through records of the members of a graduating class to determine graduate rates than were other types of institutions.

About 75 percent of postsecondary institutions reported having a student tracking systems. Of these, about one-half (54 percent) could calculate a graduation/completion rate for a cohort of students (where a cohort is defined as a group of students identified by some common characteristics such as first year enrollment). This translates to only about 41 percent of all institutions that could implement a cohort methodology.

In schools where use of a cohort methodology is employed, however, there seemed to be a substantial degree of similarity in the definition of the initial cohort to track. Over 85 percent (or 34 percent overall) included first-time, first-year, full-time, degree/certificate seeking students in their cohort for calculating a graduation/completion rate and 62 percent (or 25 percent of all institutions) included first-time, part-time students in their cohort. Surprisingly, 42 percent (or 17 percent overall) included any student registered for credit in their cohort, and 11 percent (or 5 percent overall) included non-degree-seeking, non-credit students.

However, these similarities seem to break down in the process of tracking a cohort. For example, there was significant variation among institutional sectors in the percent of institutions that add transfers into

[36] Tables supporting the statements made on the basis of NCES' Fast Response Survey in this section are available in appendix D.

the institution to an already established cohort.[37] They ranged from a low of 17 percent of public 4-year institutions to a high of 84 percent of public less-than-2-year institutions.

Additionally, institutions dropped students from an established cohort for a variety of reasons that differed for the different institutional sectors. For example, about 24 percent of all institutions reported dropping a student from an established cohort if the student changed from degree-seeking to non-degree seeking status. However, 40 percent of private non-profit institutions report dropping these students and over 30 percent of all 2-year institutions reported dropping these students. Institutions were even more likely to drop transfers out or stop-outs from their established cohorts (51 percent reported doing this), although reports of this type of action ranged from 21 percent of public 4-year institutions to 79 percent of private, non-profit 2- and less-than-2-year institutions.

Even the definition of a graduate/completer varied somewhat among institutions. Almost all institutions considered the recipient of a degree or certificate as a graduate/completer. Seventeen percent of the institutions considered a student who transferred to another institution as a completer although over 25 percent of public sub-baccalaureate schools included transfers out of the institution as completers.

Thus, while it would appear that there is some comparability in methodology used by postsecondary institutions to determine a graduation/completion rate (most track students through a cohort methodology), the rates themselves are probably not as comparable as the similarities in methodology would suggest. This is primarily due to real differences among institutional sectors in terms of who is included in establishing a cohort, who is added to an established cohort, and who is dropped from the cohort.

Differences in definitions among institutional sectors even within a single state were cited as being extremely problematic in interviews with representatives of state vocational oversight agencies.[38] As the summary of this report emphasizes, one of the issues that arises from a division of oversight responsibilities among state agencies is variability in the types of information required of the schools, as well as in the definitions of various performance measures. This means that individual institutions are most probably reporting different sets of information and using differing definitions and criteria for outcomes of interest.

This appraisal was confirmed by REA's survey of postsecondary vocational oversight agencies in the 50 states.[39] As the survey results presented in the previous section clearly indicate, it would seem that state vocational education oversight agencies have a substantial amount of data that are related to student outcomes. However, the comparability of these data among states is questionable at best. For example, 38 states define a completer as one who completes all program requirements and is awarded

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[37] This procedure would tend to increase the graduation rate of an established cohort.

[38] Research and Evaluation Associates, Consumer Information in postsecondary education: Case Studies of Three States, Draft Report, U.S. Department of Education, Office of Planning, Budget, and Evaluation, June, 1991.

[39] Research Evaluation Associates, State Level Measurements, op. cit.

a degree, diploma, or certificate. However, 13 of them define completion as receipt of an AA degree only. Nine states define a completer as a full-time or part-time student who completes all phases, planned course sequences, competencies, etc. of a defined program.

Similarly, as reported in the previous section, 27 of these agencies, representing 46 percent of public 2-year and less-than-2-year schools, collect data on training-related placement. However, the methodology for collecting these data varied considerably among the states. Specifically, 23 states allow former students to make the determination of relatedness, 5 allow schools to do so, 2 allow the state agency to make the determination, and 1 allows employers to make that determination. Additionally, 24 state agencies defined placement as "program completed and employed in training related area;" 12 states explicitly include those who join the military or transfer to a four year college as being placed, and 7 define placement as "program completed and employed in any job."

D. Summary and Conclusions

The problems identified in nationwide reporting of student level outcome information at a sub-national level (state or institution) may be summarized as follows:

(1) Use of surveys of graduates to assess post-completion outcomes (training-related employment, earnings, licensure) are generally unreliable. They may be biased as well since response rates to these surveys are fairly low and there is little information on the characteristics of non-respondents.

(2) Definitions of critical terms are inconsistent among institutions and institutional sectors nationally and within states that have different reporting requirements for different institutional sectors. This seems to be the case for almost all student outcomes statistics.

(3) From the ACE survey concerning higher education assessment, only 18 percent of all institutions felt their tests were comparable to those of other institutions and these were schools that were required to report assessment results to a state oversight agency. Moreover, it is not possible to determine the extent of the comparability (e.g., only peer institutions within the state, all other public institutions in the state, cross-state peer institutions).

The prevalence of student outcome statistics suggests widespread interest in these data and good faith efforts to collect and maintain them for institutional or state reporting. However, just based on the very broad-brush view of the problems that were presented here, it would be reasonable to conclude that, at the present time, no nationwide student outcome data reported (or disclosed) by institutions or at an institutional level would be useful for the consumer protection purposes implied in the Student-Right-to-Know Act. Based on the quality of these statistics, none of them, including graduation/completion rates, are feasible.

The Student-Right-to-Know Act, however, does not require disclosure of these statistics based on current data or reporting capability. Rather, the first disclosure (and reporting) requirements are

required in July 1993. This provides some time for effecting changes in definitions and methodologies that will help create a more comparable and complete set of institution-level student outcomes statistics at a national level.

With this in mind, Section V of this report presents the results of discussions with the postsecondary community, expert thinking in the area, and a model of state-level data collection that can be used to describe some long-term goals in the reporting of institution-level student outcome statistics.

SECTION V

WHAT IS NEEDED

A. Introduction

As Section IV indicates, virtually no currently available institution-level student outcome statistics would provide meaningful and useful nationwide data. However, it is possible to bring some order to the collection and reporting of the data if definitional consistency and standardized data collection procedures and methodologies are established at a national level and implemented at the institutional and/or state level. In fact, personnel from state postsecondary vocational oversight agencies advocated embarking on this process[40] and this process was initiated by special working groups comprised of representatives of broad segments of the postsecondary education community. This section identifies those aspects of student outcome statistics that require definitional specificity and describes data collection procedures and methodologies that could introduce some assurance of quality and comparability into the nationwide reporting of institution-level student outcomes.

In approaching this task, each of the outcome statistics is treated separately since necessary definitions and "best practice" in collecting them would be different. However, just describing how good quality, comparable national outcome statistics could be achieved certainly does not guarantee their "feasibility." There is a huge gap between identifying good and appropriate practice and having that practice instituted on a universal basis. That is, there are additional steps that would have to be taken to facilitate the adoption of this best practice including the investment of resources (personnel, funds and sufficient time) if reporting of any nationwide institution-level student outcome data is to be useful for consumer protection or any other comparative purpose.

For each outcome statistic considered, the general parameters for collection and reporting will be suggested. These parameters include critical elements that require consistent definitions, collection and reporting procedures, and populations of interest. They were developed by combining expert opinion, current institutional practice, and detailed studies of in-place systems that have demonstrated effectiveness and potential portability. In some instances this process identified specific definitions or methodologies and these are included. In other instances, it led to more than one alternative for the same parameter. In these cases, the different alternatives are presented, although a rationale is provided for possibly choosing a single "best" alternative.

As this approach evolves it will become apparent that there are distinctions between those statistics that an individual institution could collect and maintain and those that must be developed and maintained at a state or possibly even a national level. Also as a result of this discussion, it will become evident that there are certain outcome statistics that defy consistent and comparable reporting because of the diversity of postsecondary education in the United States.

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[40] Research and Evaluation Associates, Consumer Information, op. cit.

B. Graduation/completion rates

Conceptually, a graduation/completion rate is the percent of students who complete a postsecondary program relative to the number who start the program. With this in mind, operational definitions of graduation/completion and postsecondary program must be established; students who start and students who complete must be specified; and the methodology used to determine the rate must be identified.

For graduation/completion rates, the methodology used to collect the data and the procedures used to determine the rate are the most critical elements. They dictate the populations of interest and they provide boundaries for the needed definitions.

1. Determining graduation rates

Among all groups consulted, there was a broad consensus that a forward-looking cohort methodology was the only appropriate method for producing a valid and meaningful institutional graduation rate.[41]

Employing this methodology entails identifying all students who start a program at one point in time (e.g., a specified term) as members of a distinct "cohort" to be tracked. At subsequent time intervals (possibly each subsequent term), enrollment information for each member of the cohort would be added to the cohort record as appropriate, until the end of a predefined tracking period is reached.

For example, a cohort could be established each fall term, or in October of the school year, if academic terms are not relevant. Subsequent enrollment information could be added each fall for members of the cohort.[42]

The population of interest would be individuals who start a postsecondary program. That is, it would be comprised of those individuals who enroll in a postsecondary institution for the first time in the fall. It would include, at a minimum, those enrolled for the first time in any postsecondary institution (i.e., those individuals who never attended any postsecondary institution). Alternatively, it could also include those who enroll for the first time in a given institution. This latter group would be comprised primarily of individuals who transferred into the institution from another postsecondary institution. Advice on this issue has been somewhat conflicting,[43] but there was a strong belief among some groups

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[41] This was expressed clearly in the first working group meeting on implementing the SRK Act in March, 1991. A summary of this meeting is available in appendix B.

[42] While limiting cohorts to students who start a program in the fall disregards students who start at other points in the school year, students who enroll for the first time in the fall constitute a high proportion of enrollment in higher education institutions (90 percent of all students) and adequately represent all students in other types of institutions. Although some institutions currently establish additional starting cohorts for terms other than fall, academic calendars vary sufficiently that consistent national reporting is precluded. Additionally, standard fall term reporting is also already established for NCES' Integrated Postsecondary Education Data System so that existing definitions and inclusion criteria can be partially used. Consistent with the NCES definition of fall enrollment, prior summer-term starters--if they are degree-seeking matriculants--may appropriately be included in fall cohorts, if so identified.

[43] Based on estimates from NCES' 1987 Survey of Recent College Graduates, on average, individuals who complete a baccalaureate degree attend 1.7 institutions. Thus, a fairly significant segment of the student population transfers from one institution to another and students who transfer should have some estimate of the likelihood of completing at the transfer institution.

that individuals who transfer into an institution also should be aware of their completion possibilities. This was considered as particularly important for student athletes who transfer from a 2-year to a 4-year college and have continued eligibility for intercollegiate athletics. If cohorts were established for beginning postsecondary students and for transfers into the institution, there was no question that they should be considered as separate cohorts and tracked and reported separately.

Section 103 of the SRK Act requires that graduation/completion rates be determined only for first-time, full-time degree-seeking undergraduates. Translating this requirement into the parameters for identifying who should be included in a cohort eliminates undergraduates who enroll for the first time on a part-time basis. This has the effect of neglecting almost 30 percent of students who enroll for the first time in any postsecondary institution.[44] Furthermore, while there was widespread agreement that a cohort should be limited to students who are seeking a degree or other formal award, there was little agreement on limiting a cohort to full-time students only. Moreover, about 62 percent of institutions that currently use a cohort methodology to determine graduation/completion rates include part-time students in their cohorts. Even more significantly, students frequently change from full- to part-time status between enrollment periods or even within a single enrollment period. Therefore, the inclusion in a given cohort of students who enter for the first time as part-time students should be seriously considered.

An alternative to including both full- and part-time students in the same cohort is to establish two separate cohorts of entering students--one comprised of full-time students and the other comprised of part-time students. Each cohort would be tracked separately for the same specified period of time and separate graduation rates could be reported.

Two terms remain to be operationally defined--"degree-seeking" and "graduation/completion." For the purpose of defining a cohort, degree-seeking would be enrollment in any course that can be used for credit toward a degree or other formal award, regardless of whether the student has declared a formal intent to seek a degree. If first-time, part-time students were included in the cohort, however, their intent to seek a degree should be formally declared.

Graduation/completion would be receipt of any degree or formal award, regardless of the degree or award the student was seeking on entrance, although there was some concern that this definition could result in the proliferation of certificate programs at 2-year schools and sub-baccalaureate programs at 4-year institutions.

Using the methodology outlined, statistics on both persistence (re-enrollment of members of the cohort in each succeeding fall) as well graduation rates could be generated. However, it has been suggested that both statistics (persistence rate and graduation rate) be compiled on the basis of enrollment at a single institution regardless of whether or not students subsequently re-enrolled elsewhere. This is consistent with current best practice in student tracking and yields straightforward, easily-interpretable statistics.

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[44] This is based on 1987-88 higher education enrollment data from the Integrated Postsecondary Education Data System (IPEDS) as presented in the State Higher Education Profiles: Third Edition, U.S. Department of Education, 1991.

Students who withdraw from a given institution in order to transfer to another institution should not be removed from the starting cohort. Rather, the proportion of students in the cohort successfully transferring to another postsecondary institution should be separately ascertained and reported. (In this section, transfer to another institution [higher level] is considered a separate outcome from graduation since it requires an entirely different set of procedures for consistent, unbiased, and comparable reporting among institutions. Procedures for determining students' transfer status will be indicated in a separate section.)

Because the methodology suggested utilizes a cohort, two kinds of data elements are required. First, descriptive information is needed indicating the student's status at time of entry; typically, this includes demographic and other background information necessary for reporting completion rates for different student populations. Secondly, limited performance information is needed on a term-to-term basis; typically this information is extracted for each student in the cohort and used to update that student's record for the term in question.

2. Reporting graduation rates

Reporting from the proposed system could include three major performance statistics, reported annually each fall:

- percent completed - This statistic represents the proportion of the identified starting cohort that had completed a degree or certificate up to and including the point at which the report is generated.

- percent persisting - This statistic represents the proportion of the identified starting cohort that re-enrolled at the institution in pursuit of a degree or other formal award at the time of reporting. This statistic would provide valuable contextual information for interpreting percent completed. In addition, it would enable institutions to report a meaningful progress statistic in the first year(s) of a cohort's history, rather than waiting to report until sufficient time has elapsed for substantial numbers to complete the program.

- time to completion - This statistic represents, for those who completed, the average amount of time (e.g., number of years) required to complete the program. It also would provide contextual information of interest to consumers and would be valuable to the institution and state.

All three statistics could be reported annually, probably in the fall, if records were updated as of this time period. They would include the percent completing at the point of "150% of normal" time to program completion.[45] All three could and should be reported by static student variables as those

[45] 150% of normal time is the maximum time specified in the SRK for reporting graduation/completion rates. For example, for a program that would normally be completed in 4-years, "150% of normal time" would be 6 years.

specified such as race/ethnicity and gender and others identified in section 104 of the SRK Act. They can be reported since they are fixed once a cohort is identified and they should be reported because they would make graduation/completion rates more meaningful to potential students.

About 41 percent of all postsecondary institutions reported having a record system that was able to track cohorts of students.[46] Most other postsecondary institutions probably possess the base data necessary to develop the methodology indicated here and could construct or adapt a free-standing student tracking system from their base data systems. Costs to establish such a system tailored to the requirements of a particular institution initially average approximately $25,000.[47] Systems or consortia of institutions can reduce these unit costs substantially using a common methodology. Nevertheless, they will incur costs in extracting the data from their local records system and converting it into the standard formats required by commonly-developed tracking software. Here, per-institution costs of approximately $10,000 can be expected.

Institutional costs of developing a student cohort tracking system can be reduced substantially if state or system-wide unit-record data are used to centrally prepare completion statistics for each institution. Currently, several states have this capability in place, and additional states plan such systems in the near future. Most current state systems cover only public institutions, and sometimes contain only a subset of public institutions in the state. However, with sufficient incentive and assistance the coverage of existing state systems could be extended to include private sector institutions and more states could develop these systems. Because of the large number of student records involved, costs would be higher than for a comparable single-institution installation, although the per-student cost would be less. A good estimate would be approximately $50,000 for a state of moderate size.

For any of these options, time is required to develop the required system development, and for an established cohort to "mature" to the point of program completion. It is unlikely, therefore, that a significant number of institutions would be able to meaningfully report graduation rates using best practice methodologies before about 1995.

3. Completion Rates by Field of Study or Academic Division

Tracking a cohort by any variable that could change frequently during the tracking period is difficult. This, however, is the situation with respect to field of study or academic division. Additionally, the point at which major field of study must be declared by students varies considerably among institutions and programs, and oftentimes students simultaneously enroll in more than one field. All of these situations are especially prevalent in higher education institutions. There may be exceptions to these patterns for certain professional, occupational, and technical fields in which students enroll in single-program institutions or are admitted directly to particular programs and tend to pursue these programs in isolation. Reporting graduation/completion rates by these limited fields is not reasonable to

[46] NCES Fast Response Survey of Institutional Capability, table C-III, appendix C.

[47] All cost estimates were provided by P. Ewell and D. Jones of the National Center for Higher Education Management Systems (NCHEMS) and are based on their experience in developing institutional and state student cohort tracking systems.

advocate, however, since such limited and selective reporting could be considered "unfair" and, indeed, would not be very useful from a comparability perspective.

Two measures can be identified, however, that could serve as proxy measures for completion by field of study or academic division. One measure would use the cohort methodology described earlier. Completion statistics could be calculated on the basis of students' intended major (or academic division) at time of entry. This measure would have some utility. It is static and would indicate the percent of students who intended to major in a given field who actually completed in that field. Alternatively, average time-to-completion could be determined by final field of study. The method here would be to: (1) sort all students completing programs in a given year into their respective fields of study at time of graduation; (2) calculate a time to complete for each completer on the basis of his/her first term of academic history; and (3) average these times over fields of study to yield a typical time to complete.[48] Average time to completion might be misleading, however, because of the increasing incidence of dual majors.

C. Student Follow-up Statistics

Standard practice in obtaining information about individuals once they leave the institution (either completers, transfers, stop-outs, or drop-outs) is to conduct a follow-up survey--either by telephone or through the mail. Fifty-three percent of all postsecondary institutions reported using this method to determine employment outcomes of graduates/completers. Additionally, many states currently require occupationally-related programs to report job-placement statistics on this basis and some state oversight agencies conduct such follow up surveys of completers of their institutions. As was amply demonstrated by the description of the Vocational Educational Data System (VEDS), however, response rates using this method are generally inadequate, and inadequate response rates often result in inconsistent, non-comparable, and biased data. Adequate response rates are extremely difficult to obtain because of the inability to locate former students. Furthermore, once students are located, the costs of intensive non-response follow-up are high.

Even if an adequate response rate were made a standard for reporting outcome statistics, this would not preclude the problems with the basic methodology. Meeting such a standard would force institutions (or states) to utilize significant resources. (NCES follow-up surveys of 4-year college completers cost about $35 per case to achieve a response rate of 80 percent which is probably adequate to produce reliable data.) Reporting response rates together with the statistics themselves is a procedure that is used in some existing reporting systems (for example, in the program review processes of community college occupational/technical programs in Florida and Maryland). However, simply knowing what proportion of students responded does not even suggest the consistency or representativeness of the data, particularly if the rate is low.

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[48] Ewell P. and Jones, D. op. cit.

1. Employment of graduates/completers

An alternative methodology for determining employment rates of graduates/completers is available at the state level through electronically linking files containing graduates/completers with available Unemployment Insurance (UI) Wage-Record Data.

A study of this approach in tracking completers of Job Training Partnership Act (JTPA) programs concluded that "obtaining post-program information from state UI systems is not only a viable option, it is far more cost-effective than the current practice of gathering this information through contact with participants."[49] The report goes on to indicate that there are no "insurmountable technical barriers to the use of UI wage record data as an evaluation tool.... The UI system can provide extremely accurate and reliable information on the long-term labor force experiences of program participants."[50]

The two primary issues in using UI data to determine employment outcomes are: how out-of-state employment can be addressed; and the lack of coverage of certain types of employers or employment, including federal civilian and military employees, U.S. postal service workers, railroad employees, most independent contractors, employees of religious organizations, and self-employed individuals.

The Florida Employment Training Placement Information Program (FETPIP) provides a model for using UI wage records to monitor employment outcomes of postsecondary completers. (Florida uses this system to determine employment outcomes of leavers as well.)

To supplement the UI data and to adjust for the incomplete coverage, the state has implemented cooperative agreements with other state and federal agencies to extend the coverage of FETPIP to employers not included in employer records. Additionally, employers of students identified through the wage records are asked for two data elements on each employee--specific occupation and county. Finally, institutions survey graduates/completers for whom no wage data are found in an attempt to account for completers who are unemployed, self-employed, not in the labor market, or employed out-of-state.

The advantages of using UI wage data in Florida derive from three sources: costs, data quality, and burden reduction. FETPIP is much less costly than earlier systems that attempted to collect analogous information. Typical costs for collecting training-related outcome information for just vocational program completers and leavers averaged $17 per student, and the response rate was typically around 20 percent. FETPIP costs less than $3 per student and routinely traces close to 90 percent of the completers and leavers. In the past, the state budgeted $6 million annually to document compliance with the state's vocational placement standard, while the FETPIP budget is around $300,000 per year.[51]

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[49] Baj, J., Trott, C.E., and Stevens, D. A Feasibility Study of the Use of Unemployment Insurance Wage-Record Data as an Evaluation Tool for JPTA. National Commission for Employment Policy, Research Report Number 90-02, January 1991.

[50] Ibid., p. 95.

[51] Research and Evaluation Associates, Consumer Information, op. cit.

One other advantage of using UI wage data cited in the National Commission for Employment Policy's (NCEP) report is the analytic flexibility it allows. For example, when UI wage records are merged with institutional student records, earning histories may be examined by completer/graduate characteristics and postsecondary experiences.

NCEP's report suggests two strategies for determining outcomes of students employed out-of-state: developing data-sharing agreements with neighboring states and developing a national archive for state UI data. This report suggests that there is a great deal of interest in a national archive; and, if such an archive were developed, the coverage issue surrounding out-of-state employment would become moot.[52]

NCEP's report also provides estimates of the cost of this system. Start-up costs for designing and implementing a system using UI wage-record data vary depending on the size of the state program, but would be a minimum of $20,000. Maintenance cost estimates range from $2,700 to $10,000 per year.[53] This report concludes that, "the cost of implementing a national UI-based data collection system is estimated to be less than one-half the current cost of collecting survey data, and the ongoing costs of maintaining the system are estimated to be less than one-fifth."[54] Florida's reported experience indicates the cost might be even less.

While this approach appears capable of efficiently generating placement statistics on 75 to 90 percent of an identified postsecondary population, conceptual issues would still have to be resolved in reporting comparable job placement information among postsecondary institutions. These include: (1) identifying the appropriate time period allowed for placement (for most programs, the time allowed for placement is one year after graduation or completion); (2) standardizing definitions of "related field" (to be meaningful, job placement statistics should be concerned with occupations that are related to the student's program of study); and (3) developing a methodology for determining if "related employment" is consistent with the level of training received (and paid for). That is, while a completer may be working in an appropriate field, it may be in a job that could have been obtained without training, or with a lower level of training.

To make the implementation of a UI-based system useful for generating comparable statistics across institutional sectors, every postsecondary institution in a state would have to be included in the state's system. This is an enormous requirement and one which even Florida has not yet been able to meet. The inclusion of for-profit postsecondary institutions is planned, but not yet implemented by FETPIP.[55] Obviously, use of this methodology on a nationwide basis could not be achieved for several years.

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[52] Baj, J., Trott, C.E., and Stevens, D., op. cit., p.vi.

[53] Baj, J., Trott, C.E., and Stevens, D., op. cit., p.43.

[54] Baj, J., Trott, C.E., and Stevens, D., op. cit., p.44.

[55] Research and Evaluation Associates, Consumer Information, op. cit.

2. Transfers to Another Institution

Section III notes that tracking transfers from one institution to another seems to be very problematic since only 15 percent of institutions reported having this capability (table III-4). As in job placement, the primary method currently available to individual institutions for obtaining statistics on further postsecondary enrollment is a periodically administered cross-sectional follow-up study of former students. Such studies are subject to the difficulties noted earlier. Additionally, NCES' survey of institutional reporting capability suggests that far fewer institutions use follow-up surveys to ascertain transfer rates than use them to determine employment outcomes.

Alternatively, states that have statewide student record systems can automatically determine transfers from any institution included in the statewide system to any other institution in the system. This, therefore, is a rational approach to the student transfer issue. For most current statewide systems, however, only public institutions are included. As a result, there is a large information void concerning transfers to and from private postsecondary institutions. Private institutions would be put into an unfair situation if transfers to another institution were considered a completion for determining an institutional graduation/completion rate. Obviously, this particular void could be filled if states included all in-state postsecondary institutions (public and private) in their statewide systems. This would account for a significant proportion of all transfers, and, by developing data-sharing agreements with neighboring states many of the remaining transfers probably could be accounted for.

Another emerging approach is the "electronic transcript" now being developed by several college and university consortia under the aegis of the American Association of Collegiate Registrars and Admissions Officers (AACRAO). Under this method, machine-readable performance and enrollment information about individual students can be transmitted from one institution to another to permit the generation of aggregated transfer statistics.[56] However, the use of this system for this purpose has not yet been demonstrated.

3. Passage Rates on Licensure Examinations

Section III demonstrates many of the problems in collecting information on results of licensure examinations through interviews conducted with a limited number of licensure boards. These problems include state laws on confidentiality and the vastly different policies regarding reporting of results of examinations administered by state licensure boards, professional societies, and testing companies. There is little question that institution-level passage rates on licensure or certification examinations are relevant indicators of student achievement, and, when administered at a national level, would result in comparable inter-institutional statistics. It must also be noted, however, that they tend to be concentrated in health, education-related, and engineering-related occupations although they also are required by some other occupational and professional fields. Even within fields, it may be that only a small percentage of practitioners are typically certified or licensed. For example, civil engineers must be licensed to practice, but electronic engineers do not need licensure. Thus, coverage is a problem.

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[56] Task Force on the Standardization of Postsecondary Education Electronic Data Exchange, A Guide to the Implementation of the AACRAO Electronic Transcript, American Association of Collegiate Registrars and Admissions Officers, 1990.

In a small number of programs, principally education and social service occupations, the award of a degree from an officially certified program itself constitutes licensure.

To summarize, then, the major problems associated with the feasibility of reporting licensure pass rates are uneven coverage across fields of study, and the difficulty of obtaining institutional aggregates of student performance on such examinations. Regarding the first, not much can be done. Past experience with baccalaureate programs (principally in Tennessee, where such statistics are required) indicates that approximately one-third of all major fields of study in a typical university may be covered by an established examination of some kind. This includes not only examinations that certify fitness to practice, but also examinations governing admission to further professional study such as the Medical College Admissions Test, the Law School Admissions Test or the Engineer in Training Examination. Approximately one-half of professional fields and virtually all traditional academic fields of study would be excluded from such reporting.

Regarding the second, it may be possible to aggregate scores by institution by working individually with each of the agencies responsible for administering certification or licensure examinations. In Tennessee, for example, institutions have negotiated bilateral arrangements with many such associations and agencies to obtain the required information. Establishing such relationships, however, takes considerable time and resources and is not always successful; some agencies will simply refuse to provide scores or pass rates on this basis. An obvious alternative is to request students and former students to supply this information to the institution via a survey questionnaire. This method can obtain partial information that might otherwise not be available at all, but is subject to the significant problems of partial response and associated response bias.

D. Assessment Outcomes

Currently, no national instruments or methods are available to reliably report standard levels of achievement for postsecondary students. Proposals for the development of such methods are presently under consideration by the National Goals Panel. They call for the development of a strategy to assess critical thinking, communication, and problemsolving skills among graduating college seniors. Such an assessment, it is estimated, is more than 5 years away and is intended to sample graduating seniors on a national basis rather than provide comparable outcome results from all postsecondary institutions. Furthermore, if criterion-referenced tests measuring critical thinking, communication, and problem-solving skills were used, they may not be relevant to students enrolled in postsecondary vocational or occupational programs.

On the other hand, as Section III indicates, about 72 percent of higher education institutions currently assess basic college-level skills. Although these tests may be primarily entrance examinations for advising or course placement purposes, it does suggest a very strong interest in this area of assessment. Moreover, basic college-level skills could certainly be considered a relevant outcome of any postsecondary participation regardless of program content and objectives. This is especially true if basic college-level skills are defined in terms of such areas as reading, writing, and mathematics. While basic college-level skills may be relevant to all postsecondary institutions, for some institutions, they may not be outcomes but inputs. Students enter postsecondary education with widely disparate levels of skills in reading, writing, and mathematics. Indeed, many postsecondary institutions select

students primarily on the basis of their high skill levels and general learned abilities. As a result, conventional, normative, standardized testing of a student's basic college skills in postsecondary institutions would not be very meaningful as a student outcome.

One alternative to conventional normative or criterion-referenced testing might be to take a "value-added" approach to the measurement of college-level skills. This approach would measure entering students' skill levels on a standard assessment instrument that has been designed to have a very low floor and a very high ceiling. Retesting students after a predetermined period of attendance (defined, perhaps, in terms of number of credit or contact hours attained) would indicate changes in students' scores and this change would be considered the student outcome. Of course, for this approach to be valid, change scores would have to be scaled for equivalency from each successive achievement level, a scaling technique that might require considerable development.

Another possibility is to develop standard college-level minimal competency tests for each of the 50 program areas listed in the Classification of Instructional Programs, or, if necessary, for specific major fields of study. Use of such tests could indicate the percent of students who achieved a minimum knowledge base in their field. Thus, it would be tantamount to having licensure/certification examinations that covered all fields and were appropriate, but different for all institutional sectors.

In addition to the significant and costly research and developmental work that would be necessary to effect either of these assessment programs, assessing students on a nationwide basis to obtain institution scores would necessitate its acceptance by all segments of the postsecondary community. Given the current climate of postsecondary education and the widespread interest in assessment, however, these may not be entirely intractable problems.

SECTION VI

SUMMARY AND CONCLUSIONS

A. Summary

The purpose of this study was twofold: to determine the current availability and utility of student outcome statistics in the nation and to examine the feasibility and desirability for institutional reporting of student outcome data. In so doing, it will assist in responding to the mandate of section 103(c) of Title I of the Student-Right-to-Know and Campus Security (SRK) Act (PL 101-542) that requires the Secretary, in conjunction with representatives of institutions of higher education, to "analyze the feasibility and desirability of making available to students and potential students -

(A) the completion or graduation rate of individuals at an institution broken down by program or field of study;

(B) the completion or graduation rate of an institution reported by individual schools or academic divisions within the institution;

(C) the rate at which individuals who complete or graduate from the program of an institution pass applicable licensure or certification examinations required for employment in a particular vocation, trade, or professional field;

(D) the rate at which individuals who complete or graduate from an occupationally specific program and who enter the labor market following completion of or graduation from such a program obtain employment in the occupation for which they are trained; and

(E) other institutional outcomes that may be appropriate."

The literature in higher education and national legislation concerned with postsecondary education indicates that there has been a keen interest in student outcomes for a substantial period of time. Institutional accountability and consumer protection were identified as the primary uses for this type of data. How states use student performance information and the value of student outcome information to institutions were also described.

With respect to the current availability of institution-level student outcome data collection and reporting, it was found that:

- 79 percent of all postsecondary institutions in the country can report a graduation/completion rate, although only 64 percent of public 2-year institutions can report this statistic;

- it is possible for most institutions that disclose or report graduation/completion rates to report them by a student's personal characteristics (e.g., gender, race/ethnicity, and age) and enrollment characteristics (e.g., field of study, especially initial major field of study, attendance status, and residency status). Fewer than half the schools could report these rates by students' financial aid status or school or academic division;

- almost 80 percent of all institutions reported being able to determine employment outcomes for graduates/completers;

- 58 percent of all institutions reported being able to determine if graduates/completers obtained necessary or appropriate licenses or certifications;

- of the institutions that could report graduation/completion rates, only 15 percent said they could determine if a student actually transferred to another institution. Thus, of all the student outcomes specified in section 103 of the SRK Act, transfers to another institution seemed to be the most problematic for most institutions;

- 72 percent of all higher education institutions that are non-specialized and serve undergraduate students assess the basic college-level skills of their students;

- 39 state higher education agencies (including Puerto Rico) either have or are developing the capability to report graduation rates for post-secondary students. Of these, 19 regularly report graduation rates, 6 report them sporadically, and 11 will report them within the next few years;

- 46 community college and public vocational/technical school oversight organizations reported collecting graduation/completion data. These 46 state agencies represent about 90 percent of all public postsecondary institutions with vocational programs in the 50 states and the District of Columbia. Thirty-four of these 46 organizations reported actually computing a graduation/completion rate;

- 33 state agencies reported collecting placement data for public postsecondary school vocational completers. Twenty-seven of these agencies, representing 46 percent of public 2-year and less-than-2-year schools, collect data on training-related placement; and

- 12 state agencies reported collecting licensure information.

The quality of currently available student outcome data was evaluated in terms of their utility for the consumer protection purposes implied in the Student-Right-to-Know Act and for institutional accountability uses. The criteria applied in the evaluation included the data's validity or relevance, their consistency, and their representativeness, where possible. Currently available institution-level student outcome data also were evaluated in terms of their apparent inter-institutional comparability and their completeness of coverage.

Several problems that adversely affected the quality of institution-level student outcome data were identified:

- the use of surveys of graduates to assess post completion outcomes (training-related employment, earnings, licensure) are generally unreliable and may be biased since response rates to these surveys are fairly low and there is little information on the characteristics of non-respondents;

- there is a great deal of definitional inconsistency among institutions and institutional sectors nationally and within states. This seems to be the case for almost all student outcome statistics;

- although the ACE survey indicates that 71 percent of the institutions that were required to report assessment results to a state oversight agency felt their tests were comparable to those of other institutions, this represents only 18 percent of all postsecondary institutions. Furthermore, there were no indications of the extent of the comparability (e.g., only peer institutions within the state; all other public institutions in the state; cross-state peer institutions). Additionally, since this survey was directed only to higher education institutions, the results may not be relevant to other types of postsecondary institutions; and

- problems of reporting licensure examination pass rates were severe. They included state laws on confidentiality and the vastly different policies regarding reporting of examination results of state licensure boards, professional societies, and testing companies that administer licensing examinations. Additionally, approximately one-half of professional fields and virtually all traditional academic fields of study would be excluded from such reporting since licensure examinations are not required to work in a related field.

B. Conclusions

From the literature in the field, earlier national postsecondary legislation, reported state uses of student performance information, and the potential for institutional use of these data there is little doubt that these data are or could be useful and meaningful to many and varied interest groups in postsecondary education.

The very fact that so many institutions and states are engaged in collecting and reporting student outcome information is an additional, powerful indicator of the perceived need for, and desirability of student performance information.

The graduation/completion rates and possibly the student assessment data currently collected by institutions and states may be sufficiently valid, consistent, and unbiased to be useful to institutions or states for self-assessment or oversight purposes. However, it was not possible, within the scope of this report, to evaluate the data from this perspective. Training-related employment data, licensure pass rates, transfers to another institution, or any data that are collected through surveys of completers (or leavers) are not useful for any purpose, given the problems and costs of obtaining consistent and demonstrably unbiased data through surveys of completers.

In general, it may be concluded that the use of any of the currently available data for consumer protection purposes is highly doubtful. In order for students or other consumers to make an informed choice among postsecondary institutions, the data on which these choices rest must be comparable. From reports of institutions and states, the procedures used to collect student outcome statistics vary considerably across institutions and there is a substantial degree of definitional inconsistency as well.

The Student-Right-to-Know Act, however, does not require disclosure of outcome statistics until July 1993. There is some time, therefore, for bringing about changes in definitions and methodologies that will help create a more comparable and complete set of institution-level student outcome statistics at a national level.

To establish a national set of postsecondary student outcome statistics, representatives of broad segments of the postsecondary education community advocate establishing definitional consistency and standardized data collection procedures and methodologies at a national level that could be implemented at the institutional and/or state level.

1. Specific Suggestions

Suggestions for specific definitions and approaches to data collection procedures and methodologies that could introduce quality, comparability, and maximum utility into the nationwide reporting of institution-level student outcome statistics include the following:

Graduation/completion rates

(1) Utilization of a forward-looking cohort methodology for determining a valid and meaningful institutional graduation/completion rate. This methodology would enable institutions to report the percent of a cohort completing, the percent persisting from one year to the next, and the time to completion.

(2) Establish separate but parallel cohorts of full- and part-time degree-seeking, entering undergraduates. The consideration of part-time students is important because almost 30 percent of students who enroll for the first time in any postsecondary institution, enroll part-time. In some institutions this percentage is much higher. Furthermore, 62 percent of institutions currently include part-time students in their graduation/completion rates and attendance status can change even within a single attendance period. While it is recognized that the Student-Right-to-Know Act specifies determining graduation/completion rates only for students who enroll initially as full-time students, this is inconsistent with current trends in postsecondary education.

(3) Report or disclose all graduation rates by meaningful, static, student characteristics such as gender, race/ethnicity, age, and intended major field of study. These characteristics can easily be identified when the cohort is established.

(4) Reporting graduation/completion rates by actual major field of study, academic division or any variable that could change frequently over a short period of time is particularly difficult using the suggested forward looking cohort methodology. Therefore, reporting by these variables is not suggested.

(5) Establish separate cohorts for individuals who enroll for the first time in any postsecondary institution and individuals who are first time in the institution, that is, transfers into the institution. Report graduation rates separately for each cohort.

(6) Establish cohorts at a single point in time in the school year, rather than at multiple points.

Employment rates of graduates/completers and earnings

An efficient and cost-effective methodology for determining employment outcomes of graduates/completers is through electronically linking files containing graduates/completer records for the state with available Unemployment Insurance (UI) Wage-Record Data. Surveys of individuals after they leave the institution, although the prevalent methodology for determining employment outcomes of completers, does not generally produce consistent and unbiased data due to low response rates.

Transfers to another institution

(1) The transfer of a student to another, perhaps higher level, institution should be a separate student outcome. The percentage of students that transfer should be reported separately from graduation/completion rates.

(2) Statewide student record systems that can automatically determine transfer from any institution included in the statewide system to any other institution in the system is a rational approach to this issue. To make this a viable and complete system, all in-state postsecondary institutions (public and private) would have to be included in a statewide system. This would account for about 75 percent of all transfers.

(3) Electronic transcripts through which machine-readable performance and enrollment information about individual students can be transmitted from one institution to another is another developing method for tracking transfers. Utilization of these transcripts by the initial enrolling institution would permit the generation of aggregated transfer statistics. However, this system has not been tested for this use.

Pass rates on licensure or certification examinations

There is little question that institution-level pass rates on licensure or certification examinations are relevant indicators of student achievement and, when administered at a national level, would result in comparable inter-institutional statistics. However, the uneven coverage of licensure/certification requirements across fields and the difficulties in negotiating institution-level pass rates with the multiplicity of licensing and certification boards are currently prohibitive obstacles, particularly for schools with multiple programs. Additionally, many licensure/certification examinations are administered at the state level with each state having its own examination and criteria for passing. Thus, even were the data collectable, their comparability would be problematic.

Assessment of student learning

Consider the development of a postsecondary assessment program. It could entail a test of basic postsecondary-level skills that could measure changes in skill levels of students regardless of their initial skill level upon entrance into the postsecondary institution or, alternatively, multiple tests of subject-matter achievement. Either of these approaches would be a long-term and costly effort, but one may be tenable in view of the current interest in postsecondary assessment.

2. General Suggestions

For graduation/completion rates and other institution-level student outcomes to be as meaningful as possible to all potential users, two additional suggestions are warranted. First, student outcomes are related not only to the efforts and effectiveness of the postsecondary institution, but also to the characteristics of the students in the institution. In fact, much of the research on identifying correlates of student outcomes has shown that student characteristics are better predictors of student outcomes than institutional characteristics or processes. Thus, it is vital that contextual information describing an institution's student population be considered in conjunction with its student outcome data. Indeed, it may be that for truly valid comparisons among postsecondary institutions, institutional outcome statistics should be adjusted to account for differences in characteristics among the students served by the institution.

Second, this report revolved around the need for comparable data among postsecondary institutions for the consumer protection purposes underlying the Student-Right-to-Know Act. Yet the Act itself promulgates differential collection and reporting of institution-level student outcome statistics among postsecondary institutions. In particular, the distinctions made by sections 103 and 104 of Title I of the Act on the basis of an institution's athletically-related student aid policies should be reconsidered. If information, such as graduation rates by gender or race/ethnicity or average graduation rates are useful, they should be available to all potential students and their families and for all postsecondary institutions, not just to potential student athletes for institutions providing athletically-related student

aid. Additionally, they should be available on a national basis (as those required in section 104[57]) so that potential students do not have to identify specific institutions and make special requests for this information.

Clearly, implementing the suggestions made in this report for all postsecondary institutions in the nation will take time and resources. As a result, there is little hope that even graduation/completion rates can be fully established for reporting in 1993, as specified in the Student-Right-to-Know Act. The most realistic expectation is that institutions can immediately begin tracking entering students and disclose or report persistence rates until the first cohort matures. (For 4-year institutions the cohort would not mature until 1998 based on the required 150 percent of normal time.) This is possible because persistence and graduation rates are intra-institutional parameters that can be validly determined by each postsecondary institution acting independently.

For the other outcome statistics, the process of establishing them nationwide will be more difficult and may take more time. Each of them requires some developmental effort and involves a considerable degree of cooperation between postsecondary institutions, state postsecondary agencies, and even federal agencies. Most are possible to collect and report, however, using appropriate methodologies as those that were suggested here. Given the importance of these statistics and the need to have them available to the nation, the process of establishing them should be started.

[57] Section 104 requires the Secretary of Education to publish a report on graduation/completion rates for institutions that award athletically related student aid whereas section 103 only requires institutions to make graduation/completion rate information available to interested parties.

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APPENDIX A

Summary of the Definitions Working Group Meeting
for Sections 103 and 104 of Title I
of the Student-Right-to-Know and
Campus Security Act
March 28, 1991

The first meeting of the Definitions Working Group for sections 103 and 104 of Title I of the Student-Right-to-Know and Campus Security Act (P.L. 101-542) was held on March 28, 1991.

A set of materials, sent to invitees prior to the meeting, identified the agenda and raised some general questions concerning the direction the definitions should take, several definitional issues that had been identified, and possible alternatives for the various terms that were to be defined. Additionally, invitees were asked to consider "safe harbors" - that is, guidance on those actions that postsecondary institutions could take to be in compliance with PL 101-542 prior to the issuance of formal regulations by the Education Department (ED).

This summary follows the sequence of topics discussed. It first describes the group's consideration of the general questions, details the discussion of specific definitions, and, finally, indicates the group's suggestions regarding "safe harbors".

General Directions/Overarching Concerns

I. The first question was whether comparable definitions of graduation/completion rates, and methodologies for determining them, should be required of all institutions regardless of their type. While there was recognition of the different missions of different types of postsecondary institutions such as 4-year institutions and 2-year community colleges, there was a fundamental agreement that PL 101-542 is a consumer protection law. There was, therefore, a strong consensus that definitions and procedures needed to establish comparable data should apply to all institutions.

Additional discussion concerned short programs, those of a 9-months or less in length. Some schools may offer both short and longer programs while others, such as private career schools may have only short programs. Since students are oftentimes admitted to these short programs continually over a period of time, especially in the private career schools, there was concern that the methodology for determining graduation/completion rates for these programs should be kept as simple as possible while still ensuring that accurate, representative, and even comparable data are obtained. Thus, there was agreement that some accommodation for determining completion rates be offered to all schools that operate short programs.

II. The second general question was whether interim and/or concomitant statistics for graduation/completion rates should be identified and defined. The need for an interim or preliminary statistic, until schools have sufficient time to begin collection and follow a cohort through to completion, was fully recognized. However, the group also clearly stated that an interim statistic should not serve as a substitute for eventual determination and reporting of graduation/completion rates. Identifying concomitant statistics that could be reported in addition to graduation/completion rates was supprorted, but it was also believed that reporting of these additional statistics should be the prerogative of the reporting institution and not mandated by federal law.

The one interim statistic identified was the re-enrollment or persistence rate of the cohort of full-time, entering students for each year the cohort is followed. Re-enrollment or persistence rates were also considered to be useful concomitant statistics, even when graduation or completion rates become available for a given cohort.

There was also a brief discussion of possible contextual parameters that institutions might report, that could lead to the development of contextual indicators (composites of several institutionally specific variables). Again, however, these were perceived by the group as something an institution could report along with their graduation/completion rates, to help explain their graduation/completion rates and to facilitate comparisons of rates among similar institutions. But, institutions should not be required to report these to meet the intent of PL 101-542.

III. The third general question concerned the need to accommodate definitions and procedures to different length programs. In considering this question, the primary suggestion was targeted toward schools with only short programs (9 months or less in length) and rolling enrollments (starting a new class every few weeks). One suggestion for dealing with this situation was that in schools with only short programs and rolling enrollments, all students enrolling during the first quarter of the year (July through September) would be used as the cohort. At the end of the year (June of the following year) the number of students in the cohort who completed within 150 percent of the normal time for completing their program would be determined and this would be the number of 'completers' in a graduation rate calculation for that reporting year. Schools enrolling students on the quarter or semester system would use the same cohort as all other schools and colleges.

IV. When asked whether there was any methodology other than the use of a cohort for determining valid graduation/completion rates, the consensus was that a forward-looking cohort methodology was the only appropriate method for determining an institution's graduation/completion rate on a basis comparable with other institutions. This consensus was reached after considerable discussion of a possible backward-looking approach. The backward-looking approach proposed by one participant would assess, at the end of each year, the proportion of all students enrolled during the year for whom the ratio of credits attempted to credits earned was 150% of the number of credits needed for obtaining a degree or other formal award.

Definitions/Procedures Necessary for Defining a Cohort

The general agreement of the group for developing definitions was that, wherever possible, definitions should be consistent with those already in use by institutions either because of IPEDS reporting requirements or because of extant ED regulations for federal student assistance programs. Further, it was agreed that appropriate IPEDS definitions should generally take precedence as they are basic to current data collection would facilitate additional reporting and collection.

Entering Student

Definition

In discussions of definitions of an 'entering student', three alternatives were seriously discussed by the group.

1. One definition was the IPEDS definition of 'first-time' student. This definition includes only students who enroll for the first time in any postsecondary institution.

2. A second definition suggested would, in addition to including the IPEDS 'first-time' student, also include any student who transferred into the institution from another school, but with fewer than 15 transfer-credit hours.

3. A third possibility would include any student who enrolled in the institution for the first-time with no credits transferred into the enrolling institution, regardless of his/her previous postsecondary status. (Under this definition, a student with a baccalaureate degree enrolling in a career school or community college would be included in the cohort. This could also happen under the IPEDS definition of 'first-time', if the institution was unaware of the student's previous postsecondary status. However, institutions should, and generally do, ask students about any previous postsecondary enrollment.)

The group recommended the adoption of the IPEDS definition of 'first-time' student.

There were three reasons for this recommendation. First, institutions, especially higher education institutions, are well-equipped to identify students who meet the IPEDS definition of a first-time student since they have been reporting enrollments using this definition for a number of years. Secondly, identifying and including students who transfer in fewer than 15 credits would be difficult for institutions to do. Moreover, doing this could conceivably result in inconsistencies in cohort definition among institutions because institutions have different criteria for the acceptance of transfer credit.

Furthermore, the group believed that this definition encompassed those students for whom Congress believed consumer information was particularly important and the graduation rates of these students reflects the institutional "outcomes" measures Congress intended.

Procedures

1. What 'first-time' students should be included?

In discussing what entering student should be included, it was the consensus of the group that students enrolling in the fall only be included. This would be consistent with the IPEDS fall enrollment survey. Also, in concordance with IPEDS, first-time students who enrolled in the previous summer would be included with fall first-time enrollees.

2. When, i.e., after what period of time in attendance at the institution, should a 'first-time' student be included in a cohort?

This question was not addressed by the group.

Full-time Student

Definition

There was little formal discussion of the definition of 'full-time'. However, the general approach of being consistent with IPEDS and ED regulations, suggests that students enrolled for 12 or more semester credits or their equivalency in quarter or contact hours be considered 'full-time'.

Procedures

There was a brief discussion of procedures for identifying full-time students and their maintenance in the cohort. As a result of this discussion:

> **The group recommended that students who enroll for the 'first-time' as full time students in the fall remain in the cohort regardless of the students' subsequent enrollment status.**

This corresponds with Congressional staff's statements of Congressional purpose.

Degree/Certificate Seeking Students

Definition

As with the concept of 'full-time', there was little formal discussion of a definition for 'degree/certificate seeking' students. If the general approach of being consistent with IPEDS was applied, however, any student enrolled in courses for credit who is recognized by the institution as seeking a degree, certificate or other formal award would be included.

Completer

Definition

Initially in the discussion of the problems with short programs, it was agreed that, in schools with a mix of short and longer programs:

> **a student who receives any degree or other formal award offered by the enrolling institution would be included as a completer regardless of the degree the student was seeking upon entrance to the institution.**

There was a lengthy discussion of who else, in addition to degree recipients, should be considered a 'completer'. This discussion focussed primarily on the provision of the Student-Right-to-Know Act that indicates that 'completers' include students who transfer to another 'eligible institution' for which the enrolling institution has provided 'substantial preparation'.

The discussion of whether to recommend inclusion of transfers as part of the definition of 'completers' recognized the extreme difficulties institutions would have in determining a student's transfer status once the student has left the enrolling postsecondary institution. It was noted that institutions are usually unaware that a student has transferred. There was a stronger sense, however, that excluding transfers, at least transfers to a higher level postsecondary institution, would be detrimental to many community and junior colleges and did not meet either the spirit or the wording of the law.

Further discussion of this issue of transfers centered on some suggestions as to how institutions could determine former students' transfer status and what kind of transfer could be considered a positive institutional outcome. Two kinds of transfers were considered by the group.

1. Transfer from the enrolling institution to any other postsecondary institution regardless of the receiving institution's level.

2. Transfer from the enrolling institution to another postsecondary institution which is at a higher level than the enrolling institution.

The final consensus was to consider only transfers to a higher level postsecondary institution as part of the definition of completers.

The final recommendation of the group regarding the definition of a completer was:

> **Any student who receives any degree or other formal award from the enrolling postsecondary institution or any student who transfers from the enrolling institution to a higher level postsecondary institution.**

An additional recommendation of the group was that:

> **In reporting graduation/completion rates, schools should report rates separately for students who remained at the institution and received a degree or other formal award and students who transfer to a higher level institution.**

It was noted that these rates should be additive when determining an individual institution's total completion rate since they would have a common base.

Raised, but left unresolved by the group, was the question of a possible mechanism through which an institution could learn of transfers to another institution. Possible mechanisms identified were imposing, by law or regulation, the requirement that a transfer institution report a transfer to the enrolling institution or encouraging voluntary agreements among institutions for the exchange of this information.

Normal Time of Completion

Definition

Arriving at recommendations for a definition of 'normal time of completion' engendered a great deal of conversation and several possibilities. While the prevailing sentiment was that a fixed time for completion should be recommended, fixing a specific 'normal time' was a difficult process.

The difficulty was identified primarily for baccalaureate degree programs and emanated from two sources. First, while a baccalaureate is generally perceived as a 4-year degree, data indicate that, on the average, a baccalaureate degree is actually taking students who consistently maintain full-time attendance status about 4.5 years to complete. This raises the question of whether 'normal' time should be the perceived (and usually advertised time) of 4-years, or if it should reflect the actual time of 4.5 years?

Secondly, many schools have baccalaureate degree programs that are explicitly 'advertised' as taking five years to complete, either because the necessary coursework requires this amount of time or because other programs, such as coop programs or internships, are available to students while working on their academic degree. Further, these 5-year baccalaureate programs usually coexist with traditional 4-year programs.

Two suggestions were made to address these difficulties:

1. Institutions could report completion rates of a cohort after different time periods have elapsed (4, 5, 6 [150% of 4 years], and 7 [150% of 4.5 years] years for a baccalaureate degree; 2, 3, and 4 years for an associate degree).

2. The 'normal time for completion' could be based on the published length of programs in which the majority of students at the institution are enrolled. In conjunction with this, it was suggested that even if a small proportion of students were in shorter or longer programs at the institution, the 'normal time for completion' for the institution would be based on the program length of the majority of students. (For example, if the majority of students were in a 5-year engineering program at a given institution, 5 years would be the 'normal time of completion'.)

The consensus was that a fixed period of time - for compability and simplicity - needed to be established for both baccalaureate and associate degree programs.

While recommendations for fixing the 'normal time of completion" for a baccalaureate degree wavered between 4 and 4.5 years, the group was fairly united in recommending 2 years as the 'normal time of completion' for an associate degree. Thus, 150% of normal time for a baccalaureate degree would be either 6 or 7 years and 150% of the normal time of completion for an associate degree would be 3 years.

It was also suggested that institutions could report, if they chose, supplemental data of the graduation/completion rates for additional time periods of shorter and longer duration than that established in the regulations implementing PL 101-542.

"Safe Harbors"

The group also addressed the question of what guidance could be provided to postsecondary institutions immediately to help them meet the intent of PL 101-542. Participants were asked to suggest specific actions institutions could take to be in compliance with PL 101-542 prior to the issuance of formal regulations by the Education Department (ED). This resulted in the following recommendations:

1. **Institutions should establish a cohort of first-time, full-time, degree-seeking students as of July 1, 1991 (fall, 1991).**

2. **Schools with only short programs of 9-months or less in length should determine and have available for reporting in 1993 graduation/completion rates for the 1991-1992 academic year (July 1, 1991-June 30, 1992).**

3. **Schools whose predominant programs are a year in length should determine and have available for reporting graduation/completion rates of the 1991 cohort by July 1, 1993.**

4. **Schools whose predominant programs are two years in length should determine and have available for reporting graduation/completion rates of the 1991 cohort by July 1, 1994.**

5. **Schools whose predominant programs are four years in length should determine and have available for reporting graduation/completion rates of the 1991 cohort by July 1, 1997 or 1998.**

6. **Schools that cannot report graduation/completion rates by the first reporting year specified in PL 101-542 (1993) should have available for reporting in 1993 the percent of students in the 1991 cohort who are still enrolled in the spring of 1993 (the re-enrollment or persistence rate of the 1991 cohort). It will do the same for each succeeding cohort until graduation/completion rates can be fully reported.**

7. **Schools that have the capability of reporting graduation/completion rates for their first-time, full-time degree-seeking students for an appropriate cohort in 1993 (a 1990 cohort for associate degree recipients and a 1986 or 1987 cohort for baccalaureate degree recipients) should determine these rates and have them available for reporting by July 1, 1993.**

Summary of the Public Meeting on Definitions for Sections 103 and 104 of Title I of the Student-Right-to-Know and Campus Security Act May 14, 1991

A public meeting on definitions for sections 103 and 104 of Title I of the Student-Right-to-Know and Campus Security Act (P.L. 101-542) was held on May 14, 1991. This was the second of two meetings held with representatives of the postsecondary education community. The first meeting was held on March 28, 1991.

A set of materials, sent to invitees prior to this meeting, included a summary of the first meeting as well as the original materials that had been sent to participants in the first meeting. The new materials identified the first group's resolution of four general questions concerning the direction the definitions should take and several specific definitions that had been recommended by the first group. Also included was the first group's suggestions regarding "safe harbors" - that is, guidance on those actions that postsecondary institutions could take to be in compliance with PL 101-542 prior to the issuance of formal regulations by the Education Department (ED).

The non-ED members of the first working group had been limited to a few individuals with experience collecting and working closely with postsecondary education data. As a result, they had first-hand familiarity with institutional and state reporting capabilities and practices. The suggestions and recommendations of this group reflect this data orientation. The second group differed somewhat from the first group in that: (1) there was wider representation of the postsecondary education community including individuals who represented specific types of proprietary schools as well as the more traditional 2- and 4-year colleges; (2) there was more representation of policy-level individuals, including several state higher education executive officers and association directors; and (3) two (NCAA and NAIA) intercollegiate athletic conferences were represented at this meeting. These individuals were invited to participate in the general discussion as well as to lead specific discussions of the waiver provision of section 104.

This summary describes the group's consideration of the general questions and its discussion of specific definitions. The primary focus, however, is to indicate how this second group's deliberations diverge from the recommendations and suggestions of the first working group.

General Directions

I. In the first group, there was a strong consensus that standard definitions and procedures should apply to all institutions, regardless of their level or control in order to obtain comparable data. Both groups recognized the different missions of each of the different types of postsecondary institutions, yet both expressed the sense that PL 101-542 is a consumer protection law and comparability among sectors could be important to a prospective student.

The second group also agreed with the first group's belief that the methodology for determining graduation/completion rates for programs of 9 months or less in length should be kept as simple as possible while still ensuring that accurate, representative, and even comparable data are obtained. Thus, they agreed that some accommodation for determining completion rates be offered to all schools that operate short programs.

II. The second general question of whether interim or preliminary statistics for compliance with graduation/completion rate requirements should be identified and defined was discussed at length by the second group. As with the first group, the need for an interim or preliminary statistic, until schools have sufficient time to begin collection and follow a cohort through to completion, was fully recognized. The second group also concurred that an interim statistic should not serve as a substitute for eventual determination and reporting of valid graduation/completion rates. The one interim statistic identified by the first group was the re-enrollment, retention, or persistence rate of the first cohort of full-time, entering students for each year the cohort is followed. This was felt to be a reasonable and meaningful statistic among the second group participants.

Because the Act specifies that institutions must make graduation/completion rates available by July 1, 1993, the need for identifying a proxy graduation/completion rate (in addition to re-enrollment rates) was expressed by ED participants. They proposed using the ratio of the number of graduates/completers to the number of first-time entering freshmen 6-years earlier (for a 4-year program). This proposal was almost unanimously rejected on the grounds that: it was a completely inaccurate and misleading statistic and could be orders of magnitude different from the "true" graduation/completion rate. This could happen because, for example, the number of upper level transfers into the institution who graduate or complete would be included in the numerator (number of graduates), but not necessarily in the denominator based on a single cohort of entering freshmen. As part of this discussion, some of the more policy oriented participants suggested that, rather than reporting spurious and erroneous graduation/completion rates, institutions might be willing to assume the burden of searching through records of individual students to determine who was in the entering freshman class six years prior to 1993 (for a 4-year program), and, of these, what proportion graduated. However, the sense of the group was that this could be extremely burdensome, and was probably not worth the effort. Alternatively, the group recommended that institutions that were unable to report actual graduation/completion rates on the schedule specified in the legislation provide a "best estimate" of their graduation/completion rates until such time as they could report them for a defined cohort. Institutions that have been tracking students for a sufficient length of time to report actual graduation/completion rates should report these rates as required.Re-enrollment, retention or persistence rates were also considered to be useful and informative statistics, even when actual graduation or completion rates become available for a given cohort.

III. With regard to the third general question concerning the need to accommodate definitions and procedures to different length programs, the first group had suggested that in schools

with only short programs (9 months in length or less) and continuous enrollments, all students enrolling during the first quarter of the year (July through September) be used as the cohort; at the end of the next year (June of the following year) the number of students in the cohort who completed within 150 percent of the normal time for completing their program would be the number of 'completers' in a graduation rate calculation for that reporting year. For example, the completion/graduation rate of students who enrolled in July through September of 1991 would be reported in July of 1993.

While this suggestion was basically accepted by the second group, it was acknowledged that this methodology would result in only a partial picture of graduation rates in these types of schools, although these rates would be comparable (as much as possible) with those reported by schools with longer programs.

IV. The consensus of the first group that a forward-looking cohort methodology was the only appropriate method for determining an institution's graduation/completion rate on a basis comparable with other institutions was implicitly accepted by participants in this second group. There was little discussion of this issue.

Definitions/Procedures Necessary for Defining a Cohort

In discussing specific definitions, the process used in this second group meeting was to explain the recommendations of the first group and solicit comments.

While the general agreement of the first group for developing definitions had been that, wherever possible, definitions should be consistent with those already in use by institutions either because of IPEDS reporting requirements or because of extant ED regulations for federal student assistance programs, this approach was not readily accepted by this second, more policy-oriented group. As a result the degree of closure reached in the first group meeting was not achieved in this second meeting.

Entering Student

Definition

The first group had recommended the adoption of the IPEDS definition of 'first-time' student. Using this definition, only students who enroll for the first time in any postsecondary institution would be included in a cohort for calculating graduation/completion rates. Some participants in the second group felt that this definition did not reflect the situation in many 4-year institutions where a substantial proportion of completers may have transferred into the institution with advanced standing. It was also noted that there are some institutions that have no entering freshmen. While this problem was acknowledged by most of the group, the prevalent sentiment was that including transfers along with first-time freshmen in the same graduation/completion rate calculation should not be recommended. Rather, it was suggested that the graduation rates of

upper level transfers could be reported separately at the discretion of the institution, perhaps by aggregating transfers into a single group and reporting the persistence/graduation/completion rates for the entire group. Thus, implicitly this group concurred with using the IPEDS definition of first-time students.

Procedures

1. What 'first-time' students should be included?

In discussing what entering student should be included, the second group concurred with the consensus of the first group that students enrolling in the fall only be included. This would maintain consistency with the IPEDS fall enrollment survey. However, unlike the first group, this group felt that first-time students who enrolled in the previous summer should not be included with fall first-time enrollees. The basis for this sentiment was two-fold. First, in most higher education institutions the overwhelming majority of students enter for the first time in the fall of the school year. Second, students who enter for the first-time in the summer are oftentimes different from fall first-time enrollees. For example, they may be provisional students who would be admitted to the institution formally upon successful completion of the summer term.

2. When, i.e., after what period of time in attendance at the institution, should a 'first-time' student be included in a cohort?

This question was not addressed by the first group; however, during discussions of this issue in the second group, it was suggested by a community college representative that students should not be included in a cohort until they have been enrolled full-time for two contiguous terms, although this suggestion was not supported by the whole group.

Full-time Student

Definition

As in the first group, there was little formal discussion of the definition of 'full-time' and using a definition consistent with IPEDS and ED regulations that students enrolled for 12 or more semester credits or their equivalency in quarter or contact hours be considered 'full-time' was accepted by both groups.

Degree/Certificate Seeking Students

Definition

The discussion of a definition for 'degree/certificate seeking' students in this second group centered about the problem of unclassified students. In many institutions, relatively high proportions of first-time students are unclassified with respect to degree level. However, no

alternatives to the IPEDS definition of 'degree-seeking' that had been recommended by the first group were proposed in the discussion. Therefore, there was implicit acceptance of the IPEDS definition and 'degree-seeking' would encompass only students enrolled in courses for credit who are recognized by the institution as seeking a degree, certificate or other formal award.

Completer

Definition

The first group had agreed that any student who receives any degree or other formal award offered by the enrolling institution would be included as a completer regardless of the degree the student was seeking upon entrance to the institution. In this second group meeting there was a great deal of discussion of this definition. Some participants expressed the possibility that use of the first group's definition could lead to a proliferation of degree programs at postsecondary institutions, particularly short degree programs. It was further argued that if this proliferation did occur it would be detrimental to the institution, the student, and even to trends in degrees awarded. Thus, it was suggested that to be considered a completer, a student would have had to complete the degree for which he/she was initially enrolled. Any degree/certificate received along the way would not count in the numerator of a completion rate. While no specific recommendations concerning this issue were formulated by the group, the group did seem to concur that using the process/definition recommended by the first group could indeed create a problematic situation. There was also some consensus that perhaps this problem could not be solved through definitions.

As in the first group, there was some discussion during this second meeting of who else, in addition to degree recipients, should be considered a 'completer'. Again, this discussion focussed primarily on the provision of the Student-Right-to-Know Act that indicates that 'completers' include students who transfer to another 'eligible institution' for which the enrolling institution has provided 'substantial preparation'.

Unlike the first meeting, there was no distinct resolution to the issue of transfers. On the other hand, there was no clear dissension with the final recommendation of the first group. That is, in reporting graduation/completion rates, schools should report rates separately for members of the cohort who remained at the institution and received a degree or other formal award and members of the cohort who transferred to a higher level institution.

It had been noted by the first group that these rates should be additive when determining an individual institution's total completion rate since they would have a common base.

Normal Time of Completion

Definition

As in the first group, the prevailing sentiment in this second meeting was that a fixed time for completion should probably be specified. However, participants in this second meeting also agreed that because of the legitimate variations in 'normal time' for completion that are possible among institutions and among programs within an institution, institutions should report cumulative completion rates for a cohort over several years. For example, for a given cohort of baccalaureate degree-seekers, the proportion of the cohort graduating or completing after three, four, five, six, seven and even eight years should be reported. This recommendation was somewhat different from that of the first group.

The first group had recommended that the 'normal time of completion" for a baccalaureate degree should be fixed at between 4 and 4.5 years, and the 'normal time of completion' for an associate degree should be fixed at 2 years. The first group left reporting graduation/completion rates over several time periods to the discretion of the institution, suggesting that institutions could report, if they chose, supplemental data of the graduation/completion rates for additional time periods of shorter and longer duration than those that would be established in the regulations implementing PL 101-542.

Additional Topics

Discussion was held on several additional topics at this meeting:

1. The specific requirements of section 104, particularly the provision that the Secretary of ED could grant waivers for institutional reporting under this section if the institution's graduation/completions were reported to an athletic conference that then reported them to the Secretary of ED and if these data were "substantially comparable" to data reported directly to the Secretary by the institution;

2. The procedures that institutions should use in determining re-enrollment or persistence rates;

3. Data that should be included in developing a student-unit record system for tracking a cohort of students; and

4. A possible format for reporting graduation/completion rate data.

1. Institutional Waivers

The discussion of institutional waivers while centering primarily on the issue of 'substantial comparability' also elicited comments on the appropriateness of an athletic conference being designated as a data collection agent for the Secretary of Education. With regard to 'substantial

comparability', there was a strong consensus that 'substantially comparable' would have to be identical, both in definitions and procedures, to the data reported directly to the Secretary. The appropriateness of designating an athletic conference as a data collection agent for the Secretary of Education was questioned by several of the participants especially those representing state agencies and institutions. While some participants noted that it might be appropriate for an athletic conference to report to the Secretary on athletes' graduation/completion rates, most participants agreed that it was not appropriate for an athletic conference to report the graduation/completion rates for the entire student body of the institution. As a result, there was a strong belief among participants that granting a waiver to institutions on the basis of their reporting to an athletic conference could result in an untenable situation.

2. Determining re-enrollment or persistence rates

It was recommended that re-enrollment or persistence rates should be determined from the fall term of one academic year to the fall of the next academic year rather than from the fall term of one academic year to the end of that academic year.

3. Data elements for a student-unit record system that would meet the requirements of sections 103 and 104

It was indicated that including the following data elements in a student-unit record system would be sufficient to meet the requirements of both sections 103 and 104 of PL 101-542: student name, identification number, race, gender, degree objective, attendance status (full- or part-time) at entry and subsequent enrollment periods, date of entry, academic program at entry, athletic scholarship status, sport, each term (period) of enrollment, graduation date, degree/certificate received, and major field of study for degree/certificate. While there was no consensus on this list, there was little disagreement with it either.

4. Format for reporting graduation/completion rate data

It was suggested that rather than having the institution calculate rates, institutions should provide both the numerators and denominators that would be necessary for calculating graduation/completion, transfer, or re-enrollment rates separately for each reporting category and by any other categories that might be required (e.g., by student gender or race/ethnicity under section 104).

"Safe Harbors"

The group also addressed the question of what guidance could be provided to postsecondary institutions immediately to help them meet the intent of PL 101-542. Participants were asked to suggest specific actions institutions could take to be in compliance with PL 101-542 prior to the issuance of formal regulations by the Education Department (ED). This resulted in the following recommendations:

1. **Institutions should establish a cohort of first-time, full-time, degree-seeking students as of July 1, 1991 (fall, 1991).**

2. **Schools with only short programs of 9-months or less in length should determine and have available for reporting in 1993 graduation/completion rates for the 1991-1992 academic year (July 1, 1991-June 30, 1992).**

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6. **Schools that cannot report graduation/completion rates by the first reporting year specified in PL 101-542 (1993) should have available for reporting in 1993 the percent of students in the 1991 cohort who are still enrolled in the spring of 1993 (the re-enrollment or persistence rate of the 1991 cohort). It will do the same for each succeeding cohort until graduation/completion rates can be fully reported.**

7. **Schools that have the capability of reporting graduation/completion rates for their first-time, full-time degree-seeking students for an appropriate cohort in 1993 (a 1990 cohort for associate degree recipients and a 1986 or 1987 cohort for baccalaureate degree recipients) should determine these rates and have them available for reporting by July 1, 1993.**

APPENDIX B

Technical Notes and Tables from Campus Trends, 1991

APPENDIX B: TECHNICAL NOTES

This survey was conducted through the Higher Education Panel, part of an ongoing survey research program created in 1971 by the American Council on Education.

The panel is a disproportionate stratified sample of 1,040 colleges and universities, divided into two half-samples of 520 institutions each. The sample was drawn from *the more than 3,200 institutions listed in the Education Directory, Colleges and Universities* issued by the U.S. Department of Education. The Panel's stratification design (Table B-1) is based primarily upon institutional type, control, and size. For any given survey, either the entire Panel, a half-sample or an appropriate subgroup is used.

The sample for this survey consisted of 444 institutions in one of the half-samples, excluding specialized institutions (e.g., rabbinical seminaries and schools of art) and institutions that offer no general program of undergraduate instruction. The same half-sample has been used in all Campus Trends surveys.

The questionnaire (see Appendix A) was mailed on February 19, 1991 with the request that it be completed by the academic vice-president. By late May, responses were received from 81 percent of those surveyed. Actual respondents included: provosts, deans, or academic vice-presidents, 62 percent; associate deans or associate provosts, 9 percent; presidents, 10 percent; and other, 18 percent.

Data from responding institutions were statistically weighted to be representative of the 2,379 non-specialized colleges and universities in the U.S. that offer a general program of undergraduate instruction. The weighting technique adjusts the data for institutional nonresponse within each stratification cell.

Table B-2 shows response rates by institutional categories. The lowest rate of response was among independent doctoral universities.

Table B2—Response Rate by Institutional Categories

Control and Type of Institution	Response Rate
Total	81
Control	
Public	80
Independent	82
Type and Control	
Public Doctoral University	79
Independent Doctoral University	76
Public Comprehensive University	80
Independent Comprehensive University	83
Public Baccalaureate College	95
Independent Baccalaureate College	83
Public Two-Year College	79
Independent Two-Year College	85
Enrollment Size (FTE)	
Less than 1,000	83
1,000 to 4,999	80
5,000 to 9,999	82
10,000 and above	80

Table B-1 Stratification Design

Cell	Type of Institution	Enrollment	Population	Sample	Respondents
	Total		2379	444	359
1	Large public doctorate-granting	a	104	52	41
2	Large independent doctorate-granting	a	58	29	22
3	Large public comprehensive	a	92	46	39
4	Large independent comprehensive	a	26	12	12
7	Large public two-year	a	43	20	16
8	Public comprehensive	5,500-8,999	56	18	13
9	Public comprehensive	<5,500	108	22	17
10	Independent comprehensive	<9,000	126	24	18
11	Public baccalaureate	<9,000	127	21	20
12	Independent baccalaureate	1,350-8,999	166	26	21
13	Independent baccalaureate	<1,350	446	38	32
17	Public 2-year academic/comprehensive	6,000-8,999	55	18	15
18	Public 2-year academic/comprehensive	4,000-5,999	72	18	14
19	Public 2-year academic/comprehensive	2,000-3,999	155	24	17
20	Public 2-year academic/comprehensive	<2,000	332	25	20
21	Independent 2-year academic/comprehensive	<9,000	129	13	11
22	Public two-year occupational	2,500-8,999	63	16	14
23	Public two-year occupational	<2,500	221	22	17

a-Institutions that meet one or more of the three following criteria: (a) total full-time equivalent (FTE) 1981 enrollment greater than 8,999; (b) FTE 1981 graduate enrollment greater than 749; (c) FY 1979 educational and general expenditures of $35 million or more.

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TABLE 12 -- Current Status of Student Assessment

(Percentage of Institutions)

	Total	2-year	Baccalaureate	Comprehensive	Doctoral	Public 2-year	Public 4-year	All Independent
Our institution currently has assessment activities underway	81	88	76	82	58	90	85	70
Our institution has a separate budget (or appropriation) for assessment	28	32	21	34	22	34	36	18
Assessment is part of a self-study for a regional accrediting agency	68	66	73	72	46	65	70	70
Assessment is part of self-studies for specialized accrediting agencies	55	53	54	66	36	57	66	45
Our institution is developing:								
• its own assessment instruments	69	70	67	79	52	67	74	70
• methods of portfolio assessment	45	44	46	51	36	45	44	46
Interest in assessment has decreased	11	10	12	12	12	10	14	10
Assessment has led to program or curriculum changes	52	68	38	43	30	69	45	39
So far, assessment has mainly resulted in new reporting requirements	42	42	42	46	29	43	45	39
Percentage of our (full-time) teaching faculty who have participated in assessment:								
90 - 100 percent	16	15	21	10	6	15	15	17
60 - 89 percent	12	11	18	6	5	10	10	15
40 - 59 percent	9	13	7	3	0	11	2	11
21 - 39 percent	18	20	15	20	8	22	10	17
11 - 20 percent	12	11	12	18	8	9	14	14
1 - 10 percent	29	26	25	43	46	28	45	23
None	4	4	3	1	27	4	4	4

Source: Campus Trends, 1991, American Council on Education.

Weighted survey data (81 percent response) received from 359 institutions (including 124 two-year colleges, 73 baccalaureate institutions, 99 comprehensive universities, and 63 doctoral institutions).

TABLE 13 -- Areas of Student Learning being Assessed *

(Percentage of Institutions)

	Total	2-year	Bacca-laureate	Compre-hensive	Doctoral	Public 2-year	Public 4-year	All Independent
Assessment is in place for:								
Basic college-level skills	72	89	65	53	41	90	64	58
Knowledge in general education subjects	35	38	35	31	25	39	38	29
Knowledge in a major	36	28	44	47	23	28	41	42
Attainment of higher-order skills in:								
critical thinking	24	26	24	24	16	25	25	23
quantitative problem-solving	32	35	26	34	23	36	32	27
oral communication	28	29	27	27	18	28	27	27
writing	56	58	57	55	32	58	49	57
Changes in student values and attitudes	21	8	31	29	29	6	26	32
Long-term outcomes of graduates	29	26	30	33	29	23	31	33
Assessment is planned for:								
Basic college-level skills	17	10	20	29	19	8	21	23
Knowledge in general education subjects	34	39	28	38	24	35	34	34
Knowledge in a major	31	31	33	27	30	30	32	32
Attainment of higher-order skills in:								
critical thinking	43	49	40	38	27	47	41	39
quantitative problem-solving	40	46	39	36	19	44	37	38
oral communication	37	40	39	32	21	39	33	38
writing	27	30	26	24	21	28	27	25
Changes in student values and attitudes	35	42	29	32	26	39	33	31
Long-term outcomes of graduates	45	47	48	39	29	50	42	41

* Responses for "in place," "planned," and "no" sum to 100 percent. Percentages for "no change" are not shown on the table.

Source: Campus Trends, 1991, American Council on Education.

Weighted survey data (81 percent response) received from 359 institutions (including 124 two-year colleges, 73 baccalaureate institutions, 99 comprehensive universities, and 63 doctoral institutions).

TABLE 14 -- State Mandates for Assessment Information

(Percentage of Institutions)

	Total	2-year	Bacca-laureate	Compre-hensive	Doctoral	Public 2-year	Public 4-year	All Independent
For all institutions:								
•Percentage with a state mandate to conduct assessment	35	50	14	33	31	56	51	5
•Percentage required to submit assessment data to a state agency	25	36	9	24	23	40	36	4
Experiences, among those public institutions required to submit to assessment data:*								
Our institution has submitted data	78	81	60	71	73	81	69	*
This information has been made public	74	74	40	86	77	74	74	*
This information is comparable across institutions	71	78	40	59	46	78	52	*
The information to be reported includes:								
Description of assessment activity	90	87	100	95	100	87	97	*
Summary, next steps planned	84	79	100	90	100	79	94	*
Results on English or writing skills	65	68	60	61	46	68	57	*
Results on Math skills	64	68	40	61	46	68	53	*
Results from standardized testing	61	61	50	64	50	61	59	*
Department by department results	43	36	50	58	69	36	59	*
Findings from alumni and/or employer surveys	62	58	75	78	64	58	74	*
Submission of assessment information affects our institution's funding:*								
No	76	77	100	64	77	77	74	*
Yes, based on whether information is submitted	13	14	0	18	8	14	12	*
Yes, based on satisfactory results	10	9	0	18	15	9	14	*

* There are too few responses for tabulation among independent institutions. Percentages shown here are based on public institutions with a requirement to submit assessment data.

Source: Campus Trends, 1991, American Council on Education.

Weighted survey data (81 percent response) received from 359 institutions (including 124 two-year colleges, 73 baccalaureate institutions, 99 comprehensive universities, and 63 doctoral institutions).

APPENDIX C

Technical Notes and Additional Tables for the NCES Fast Response Survey of Institutional Capability for Reporting Student Outcomes

SURVEY OF UNDERGRADUATE REPORTING CAPABILITY

Survey Methodology and Data Reliability

Questionnaires were mailed to Registrars at a national probability sample of postsecondary institutions in early May of 1991. A modification of the 1990 Integrated Postsecondary Education Data System (IPEDS) Early Estimates sample of postsecondary institutions, the most current IPEDS Early Estimates available for use at the time, was used for this survey. The IPEDS Early Estimates sample contains 1100 institutions and is divided into 9 sectors representing institutional control (public; private, nonprofit; private, for-profit) by level (4-year, 2-year, less-than-2-year). For example, sector 1 contains public, 4-year institutions and sector 5 contains private, nonprofit, 2-year institutions. Because the 4-year and 2-year public institutions had been oversampled for the IPEDS survey and oversampling of those sectors was not necessary for the survey of reporting capability, every second institution in those two sectors, sector 1 and sector 4, was selected for inclusion in the fast response survey sample, which then contained 866 institutions.

During data collection, some institutions included in the sample were found to be ineligible. Graduate-only institutions, most of them private, nonprofit schools, were not eligible for this survey of undergraduate reporting capability. In addition, some institutions were found to have closed since the 1990 IPEDS Early Estimates sample was drawn. Ultimately, 788 of the sampled institutions were determined to be eligible.

Data collection continued though May and June, 1991 with telephone follow-up of non-respondents beginning in early June. By the end of data collection on July 9, 1991, 751 of the eligible institutions had responded, yielding an overall response rate of 95 percent. The response rate for public institutions was 97 percent; for private, nonprofit institutions, 98 percent; and for private, for-profit institutions, 90 percent (table C-1).

The survey data were weighted to produce national estimates. Weights were adjusted for unit non-response. The weighted number of institutions in the universe is 9,933. Numbers in the tables and text have been rounded; however, percentages have been calculated on the actual estimates rather than the rounded values.

Table C-1.--Response rates of postsecondary institutions to the Fast Response Survey System on institutional capabilitie by type of response and control and level of institution: 1991

Control and level of institution	Total	Out of scope	Total in scope	Type of Response: Completed by mail	Completed by phone	Refused	Non respondent	Response rate
Total	866	78	788	490	261	22	15	95.3
Public	294	8	286	201	77	2	6	97.2
4-year-and-above	92	5	87	69	18	0	0	100.0
2-year	149	3	146	97	43	1	5	95.9
Less-than-2-year	53	0	53	35	16	1	1	96.2
Private, nonprofit	323	53	270	181	83	2	4	97.8
4-year-and-above	257	46	211	139	68	1	3	98.1
2-year-and-below	66	7	59	42	15	1	1	96.6
Private for-profit	249	17	232	108	101	18	5	90.1
2-year-and-above	93	3	90	45	37	5	3	91.1
Less-than-2-year	156	14	142	63	64	13	2	89.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institution Reporting Capability, FRSS 43, 1991

The findings in this report are subject to sampling variability. If a different sample of institutions had been surveyed, the responses would not have been identical. The coefficient of variation (CV) is a measure of the variability due to sampling. It is the percent of the estimate that is due to sampling variability and indicates how much variance there is in the population of possible estimates of a parameter for a given sample size. CV's may be converted to standard errors by multiplying an estimate by its CV, converted to decimal fraction. Standard errors can be to develop a confidence interval for a given estimate. If all possible samples were surveyed under similar conditions, an interval of 1.96 standard errors below to 1.96 standard errors above the estimate would include the true population parameter being estimated in about 95 percent of the samples. This is a 95 percent confidence interval. For example, the estimate for the percent of all institutions able to report graduation-completion rates is 79.1 percent. The CV for this estimate 3.7 percent (table C-5). Dividing the CV by 100 and multiplying the resulting decimal fraction by the estimate (79.1 percent) results in a standard error of 2.9. The 95 percent confidence interval for this statistic extends from 79.1 minus (2.9 times 1.96) to 79.1 plus (2.9 times 1.96) or from 73.4 to 84.8 percent. This means that we can be confident that this interval contains the true population parameter 95 percent of the time.

Estimates of CV's were computed using a balanced half sampling technique known as balanced repeated replications. Estimated standard errors for each of the variables included in Section III of this report are contained in tables C-2 through C-5. CV's for statistics not included these tables may be obtained upon request.

For categorical data, relationships between variables with 2 or more levels have been tested using chi-square tests at the .05 level of significance, adjusted for design effect. If the overall chi-square test was significant, it was followed up with pair-wise tests using a Bonferroni *t* statistic, which maintained an overall 95 percent confidence level or better.

Survey data are also subject to errors of reporting and errors made in the collection of the data. These non-sampling errors can sometimes bias the data. While general sampling theory can be used to determine how to estimate the sampling variability of a statistic, non-sampling errors are not easy to measure and usually require that an experiment be conducted as part of the data collection procedures or that data external to the study be used for validation.

Non-sampling errors may include such problems as differences in the respondent's interpretation of the meaning of the questions, differences related to the particular time the survey was conducted, or errors in data preparation. During the design of the survey and survey pretest, an effort was made to check for consistency of interpretation of questions and to eliminate ambiguous items. The questionnaire was pretested with respondents like those who completed the survey, and the questionnaire and instructions were extensively reviewed. Manual and machine editing of the questionnaires was conducted to check the data for accuracy and consistency. Cases with missing or inconsistent items were recontacted by telephone; data were keyed with 100 percent verification.

Table C-2.--CV'S for table III-1

Control and level of institution	Total	Can report graduation/ completion rate	Student characteristics											
			Gender	Race/ ethnicity	Age	Attendance status	Initial major field of study	Final major field of study	School or academic division	Athletic financial aid status	General financial aid status	Residency status	Remedial course work	Other
Total	2.5	3.7	4.0	5.6	5.1	2.7	5.5	3.6	7.2	14.9	6.5	5.2	10.9	39.0
Public	1.2	4.3	2.1	3.1	5.5	5.5	6.3	3.2	5.0	15.7	5.2	4.2	6.0	29.7
4-year-and-above	4.8	6.1	3.5	3.6	10.2	11.8	8.6	4.6	9.2	15.4	15.6	8.7	14.9	54.1
2-year	1.3	8.2	3.3	4.0	7.5	7.7	14.3	3.9	7.4	26.6	9.9	6.5	8.3	57.2
Less-than-2-year	0.0	4.2	6.9	14.0	8.5	12.8	11.6	12.4	21.0	0.0	9.3	8.9	16.4	38.8
Private nonprofit	2.4	4.9	4.2	6.0	6.9	4.1	8.5	3.0	8.9	22.3	11.2	9.3	17.7	58.5
4-year-and-above	3.9	5.4	4.3	6.2	8.9	6.4	11.5	4.3	10.5	21.5	9.3	7.8	19.8	50.3
2-year-and-below	5.3	10.2	7.5	13.2	11.3	4.9	11.4	6.7	15.6	100.7	23.8	18.8	32.0	133.9
Private for-profit	4.5	5.4	6.8	11.2	9.3	3.9	8.2	5.3	13.1	55.2	9.7	7.6	23.6	63.7
2-year-and-above	0.3	6.5	13.3	21.5	16.0	6.5	8.1	3.7	15.9	56.9	14.9	16.5	31.7	0.0
Less-than-2-year	5.5	6.5	7.8	12.6	10.4	4.9	9.8	6.5	16.3	0.0	10.0	8.8	26.6	63.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-3.--CV'S for table III-2

Control and level of institution	Total	Method of collection: Determine employment outcomes	Method of collection: Sample survey of graduates	Method of collection: State record systems	Method of collection: Other
Total	2.5	2.6	7.4	33.6	21.4
Public	1.2	5.4	5.8	19.6	36.9
4-year-and-above	4.8	15.8	9.0	0.0	77.6
2-year	1.3	5.9	7.5	24.6	56.7
Less-than-2-year	0.0	12.2	26.4	23.8	51.7
Private nonprofit	2.4	7.9	10.9	86.2	29.2
4-year-and-above	3.9	8.7	9.5	106.4	36.0
2-year-and-below	5.3	11.2	21.7	24.6	38.4
Private for-profit	4.5	2.9	10.8	48.4	37.0
2-year-and-above	0.3	6.7	20.5	106.5	48.6
Less-than-2-year	5.5	3.4	13.2	48.3	42.0

Source: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-4.--CV'S for table III-3

Control and level of institution	Total	Determine necesary/ appropriate licenses	Method of collection		
			Sample survey of graduates	State record system	Other
Total	2.5	6.4	11.8	10.0	13.8
Public	1.2	6.0	8.8	8.7	23.2
4-year-and-above	4.8	18.0	25.7	21.5	59.2
2-year	1.3	6.2	12.1	12.6	29.6
Less-than-2-year	0.0	6.7	39.8	15.4	44.2
Private nonprofit	2.4	12.2	20.6	18.4	25.1
4-year-and-above	3.9	15.7	17.3	27.4	32.9
2-year-and-below	5.3	18.9	88.4	23.2	36.8
Private for-profit	4.5	9.1	21.5	14.5	35.8
2-year-and-above	0.3	18.6	39.7	25.8	58.8
Less-than-2-year	5.5	9.2	23.7	15.2	41.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-5.--CV'S for table III-4

Control and level of institution	Total	Can report graduation/ completion rates	Type of institution transferred to		
			In-state public institutions	In-state private institutions	Out-of-state institutions
Total	2.5	3.7	16.7	16.8	18.3
Public	1.2	4.3	14.9	21.3	22.2
4-year-and-above	4.8	6.1	39.3	101.3	101.3
2-year	1.3	8.2	18.5	27.5	29.4
Less-than-2-year	0.0	4.2	33.1	33.1	33.1
Private nonprofit	2.4	4.9	21.1	20.2	20.9
4-year-and-above	3.9	5.4	30.8	29.6	31.7
2-year-and-below	5.3	10.2	40.0	40.0	40.0
Private for-profit	4.5	5.4	33.1	27.5	30.0
2-year-and-above	0.3	6.5	52.8	52.8	50.0
Less-than-2-year	5.5	6.5	35.2	28.7	31.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Because the respondents to this survey were both institutions of higher education and other postsecondary schools, such as for-profit vocational or trade schools, the questionnaire items were worded to encompass the range of potential reporting capability and methods of record keeping. Following the pretest, several items were altered in an effort to improve clarity, in particular of questions that were pertinent to one category of institution but not to others. Nevertheless, some ambiguity remained. For example, an item asked institutions whether baccalaureate degree students, associate degree students, certificate students, and/or transfers were defined as graduates-completers at their institutions. The certificate category was included to reflect the credential signifying completion of a program that is conferred by many of the other postsecondary institutions. However, some institutions of higher education checked certificate students because they granted some certificates (e.g., teaching certificates) even though they did not count recipients of certificates as graduates nor did they include them in graduation-completion rates unless they also earned a baccalaureate or associate degree. The misinterpretation was ascertained through consistency checks with another item on the questionnaire that asked how long certificate students were tracked to determine graduation-completion status.

Extensive telephone follow-up to retrieve missing data and to resolve inconsistent item response was required for this survey. This suggests that key terms were subject to varying interpretation by the higher education institutions and other postsecondary institutions. For example, some institutions equated a student unit record system with a transcript system used for tracking an individual student's progress toward graduation-completion. Since a transcript system does not allow for tracking students who have stopped out of the program, it does not fit the strict definition of a student unit record system. Other institutions had difficulty with the concept of "cohort" even though a definition was provided on the survey instrument. Finally, there was varying interpretation of the question that asked for the institution's criteria for including students in a cohort to track graduation-completion rates. Nevertheless, inconsistent responses were satisfactorily resolved through telephone follow-up.

For the majority of the questionnaire items, the non-response rate was less than 1 percent. Exceptions were three items that asked for specific numbers from small sub-populations. For example, the number of years graduates-completers are tracked to determine if appropriate licenses or certifications are obtained was asked only of those institutions that determine licensure outcomes and that use tracking as the method to determine them, a total of 128 institutions; the non-response rate for this item was 2.5 percent. Also exceeding a 1 percent non-response rate were the item asking if all students registered for credit were included in student cohorts tracked for graduation-completion rate and the item asking institutions that did not have a student unit record system and/or track cohorts whether they expect to have that capability within five years, both of which had a 1.2 percent non-response rate.

Data are presented for all postsecondary institutions and by control (public; private, nonprofit; and private, for-profit) and level (4-year, 2-year, and less-than-2-year) of the institution.

Additional data can be found in tables C-6 through C-9.

Table C-6.--Percentage of postsecondary institutions that can report graduation/completion rates and method of calculation used, by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Total	Can report graduation/ completion rates	Method of calculation			
			Tracking class to completion	Retrospectively tracking completion class	Number of completers to number of first-time entries	Other
Total	9,933	79.1	70.5	14.9	10.1	4.2
Public	2,055	72.9	58.4	23.6	11.3	6.8
4-year-and-above	577	82.8	76.5	14.3	6.6	2.7
2-year	1,195	63.6	46.2	28.3	15.3	10.2
Less-than-2-year	284	91.9	60.5	26.6	8.6	4.3
Private nonprofit	2,548	77.4	80.7	11.3	6.9	1.2
4-year-and-above	1,542	73.6	73.9	18.8	5.3	2.0
2-year-and-below	1,006	83.2	90	1.1	8.9	0.0
Private for-profit	5,329	82.3	70.1	13.6	11.2	4.7
2-year-and-above	913	84.3	60.1	13.4	26.5	0.0
Less-than-2-year	4,417	81.9	72.2	13.6	7.9	5.7

NOTE: Percentages by method of calculation are based on institutions that can report graduation/completion rates.

SOURCE: U.S. Department of Education, National Center for Edcuation Statistics
Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-7.--Percentage of institutions with a student unit record system that track student cohorts and that use the following criteria for including students in a new cohort to determine graduation/completion rates, by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Institutions with a student unit record system	Track student cohorts	Attendance criteria			Enrollment criteria			
			First-time First-year	Full-time	Part-time	Complete a number of credits	Degree or certificate seeking	Registered for credit	Non-credit Non-degree seeking
Total	7,432	54.3	88.2	97.5	62.0	5.0	96.2	42.1	10.2
Public	1,232	54.1	90.5	98.8	62.6	6.6	84.6	53.0	11.5
4-year-and-above	381	83.9	100.0	100.0	72.1	0.7	83.5	70.2	11.3
2-year	652	42.2	87.8	97.1	58.6	15.1	81.9	42.4	10.7
Less-than-2-year	199	36.0	58.9	100.0	35.4	0.0	100.0	17.7	15.6
Private nonprofit	1,827	62.0	89.5	99.1	49.8	10.5	95.4	56.5	11.1
4-year-and-above	1,071	66.7	90.9	99.1	59.7	12.7	96.7	59.2	15.2
2-year-and-below	756	55.3	87.0	99.0	32.9	6.8	93.2	51.8	4.1
Private for-profit	4,373	51.1	86.8	96.3	67.9	1.7	100.0	31.5	9.3
2-year-and-above	748	45.0	84.2	98.4	64.4	5.6	100.0	51.1	11.0
Less-than-2-year	3,625	52.4	87.3	95.9	68.6	1.0	100.0	28.0	9.0

Notes: Percentages by attendance and enrollment criteria are based on institutions that track student cohorts.
Percentages do not add up to 100 because respondents were able to choose more than one criteria.

SOURCE: U.S. Department of Education, National Center for Edcuation Statistics
Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-8.--Percentage of institutions with a student unit record system that track cohorts and alter established cohorts used to determine graduation-completion rates, by control and level of institution: 50 States and District of Columbia, 1991

Control and level of institution	Institutions with a student unit record system	Track student cohorts	Dropping students from established cohorts			Adding transfer students to established cohorts
			Change from full-time to part-time	Change from degree or certificate seeking to non-degree or non-certificate seeking	Stop or transfer out	
Total	7,432	54.3	22.8	24.0	51.4	57.1
Public	1,232	54.1	10.9	21.5	29.9	35.4
4-year-and-above	381	83.9	10.0	15.4	21.1	17.1
2-year	652	42.2	8.8	30.2	35.5	43.9
Less-than-2-year	199	36.0	23.4	15.6	46.8	84.4
Private nonprofit	1,827	62.0	22.8	39.9	61.6	46.7
4-year-and-above	1,071	66.7	13.0	40.2	51.5	34.9
2-year-and-below	756	55.3	39.4	39.4	78.9	66.9
Private for-profit	4,373	51.1	26.3	16.7	52.6	68.8
2-year-and-above	748	45.0	34.8	36.0	55.1	74.2
Less-than-2-year	3,625	52.4	24.8	13.3	52.2	67.9

Notes: Percentages for altering established cohorts are based on institutions that track student cohorts. Percentages do not add up to 100 because respondents were able to choose more than one option.

SOURCE: U.S. Department of Education, National Center for Edcuation Statistics
Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

Table C-9.--Percentage of institutions that can report graduation/completion rates, by student graduation/completion status, and by control and level of institution: 50 State and District of Columbia, 1991

Control and level of institution	Total	Can report graduation/ completion rates	Student graduation/completion status				
			Baccalaureate degree recepients	Associate degree recipients	Certificate recipients	Transfers	Other
Total	9,933	79.1	22.4	23.7	81.0	16.6	2.7
Public	2,055	72.9	31.1	54.0	70.7	20.8	4.7
4-year-and-above	577	82.8	97.6	45.1	20.9	6.5	3.5
2-year	1,195	63.6	--	78.0	92.0	28.3	5.5
Less-than-2-year	284	91.9	--	--	100.0	25.0	4.9
Private nonprofit	2,548	77.4	62.9	23.4	54.0	11.7	2.9
4-year-and-above	1,542	73.6	94.9	30.1	27.5	8.3	2.6
2-year-and-below	1,006	83.2	19.4	14.4	89.9	16.4	3.4
Private for-profit	5,329	82.3	1.3	13.5	96.7	17.4	1.8
2-year-and-above	913	84.3	7.2	71.5	81.2	20.2	3.5
Less-than-2-year	4,417	81.9	--	1.2	100.0	16.8	1.5

Notes: Percentages by graduation/completion status are based on institutions that can report graduation/completion rates.
Percentages do not add up to 100 because respondents were able to choose more than one criteria.

SOURCE: U.S. Department of Education, National Center for Edcuation Statistics,
Fast Response Survey System, Postsecondary Institutional Reporting Capability, FRSS 43, 1991

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